The Builder.

VOL. XIII.—No. 646.

ROUTINE, the ready word, flying with the wings of every morning—the phrase of every "*leader*" where official rust, or immobility need the interposition of "the fourth estate,"—what word more appropriate now for the usual capitals to our own first column? For, if not *routine*, "the shackles of precedent," or "professional prejudice," have been terms applied to architects' practice by the *dilettanti* in art;—also by a section of the promoters of those sanitary measures which, indeed, our own columns may have assisted to advance. What, then, so apt as the word ROUTINE, withal to "point the pen" for the shedding of ink about the person of a designer and chief superintendent of military manœuvres, or some commander-in-chief of works in architecture and building?

The difficulties and responsibilities in the two positions are more and more, appearing to us to have points distinguishing them from other cases,—yet with points common to each other. We shall on all grounds animadvert, not on painful occurrences out of our proper path; nor need we turn upon our own friends,—more especially as our parallel would end with what we have just stated.—Habitual misconception on the part of the public is what the architect seems to be heir to; but that is mainly because the collective wisdom of our body attempts no explanation, where the individual and his profession are generally misunderstood. Progress in art and science has found in us,—and we honestly believe in the general profession of architects,—earnest advocacy and support.

We would, however, register a plea against the ascription of all evils, that have befallen public affairs, and works in architecture, to what is liable to be conveyed to some minds by the word *routine*. Order, system, rule, subordination, and division of labours,—these only are the means by which great undertakings—campaigns or buildings—can be accomplished. To have said this, is the result of no new discovery: and the means are comprised in what *may* be, in short, *routine*. Ill-success, perhaps through incapacity, has followed in particular cases;—on one side money may have been laid out in vain; on the other there has been superadded, disastrous loss of life. But—since the time allotted for great works is short—though genius is not to be dispensed with, something less brilliant in its manifestation is necessary. That which brings about the success of those commercial undertakings—given as examples to public departments—is, to all obviously, a certain mechanical distribution of duties in settled channels, proved to be of a labour and time-saving nature. Even where the avocations are mainly dependant upon personal exertion, conclusions from experience must be acted upon—often without fresh reference to reasons. To re-open every question when the time for action arrives, is to live in inactivity and scepticism. Therefore, those are bad teachers who would give *no* importance to precedent; and in architecture, such individuals may be fairly asked to show what they individually have done.

What is meant to be conveyed by the brilliant rhetoric of writers in the newspapers, is something very different from that against which we should have to contend. It would be found that we and they are of one mind. But a careful reader is hardly more common than a good writer,—and it would be unfortunate if ideas were disseminated, tending to give any light importance to organization and system, or even "precedent."

In fact, it is the most difficult of such questions, to say exactly where routine and precedent should cede to the working of genius,—or where they should interpose to moderate or shield. If a man be not prone to invention himself, the world about him is constantly advancing. Taught to cultivate the perceptive faculties, as every good architect is; impressed by what is new, and even impelled to the seeking of it,—it is positively impossible, as it is inconsistent and illogical, to disregard the new inventions which every day brings forth, and the altered position of the art and science of architecture which continually results. So far, it is easy for us to express the complete accordance that architects have with those who have sometimes imputed to them positively a contrary opinion.—But we must say that the onerous duties of architects, and their responsible position with reference to inventions are continually lost sight of. There is scarcely any member of the profession whose name is in the "London Directory," who does not receive at least once in every week, a circular referring to some new material, or building contrivance. Each circular is accompanied by testimonials—of course from individuals known by reputation, if not personally, to the recipient;—each circular deserves, at least, to be read, considered, and located for reference. He who can do only this, and yet not let slip more immediate duties, and who can preserve the fact of the invention in his memory,—that man is of more than ordinary *calibre*. The difficulties, however, of a course, form no reason for *abstaining* from entering upon it, where it is clearly essential to success, and morally right. No duty, whatever there is, but demands effort. For, the possible is discovered only during the act of exertion.

Let it not be thought we are giving too much importance to the trouble we have just alluded to. That would, we must admit, be comparatively slight, if it ended with the reading and filing of a document. To speak the truth, testimonials are given often with such slight regard for the responsibility—we might say the sacredness—of the duty which should be attached to the act of recommendation, that they entrap unwitting architects into mistakes, and so lead to apprehension as to untried inventions, altogether. Now, it is these exceeding difficulties in the way of sufficient trial which are so often forgotten where our profession is spoken of as narrow-minded, or prejudiced. What architect does not recollect how, at one time or another in his professional life, he seized upon and specified every invention that appeared to him an improvement—somewhat priding himself, perchance, that he at least was divested of prejudice, and disposed to employ all the advantages open to an architect of the present age. Bitter in such cases too often is the disappointment. Some of the most promising contrivances we have known not to stand the test of a year's wear. The carcase and finishings of a house should be "good" for a few generations; and the subordinate contrivances and working machinery should be in order for a fair measure of the time. It is certainly difficult enough to ensure this, even with materials of which the properties are supposed to be known; and this is no doubt in itself an argument for the search after what would better answer the purpose. Individual professional experience, however, in all directions, has been unfortunate in its discoveries. One day you shall have a new cement brought before you, calculated for use without the necessity of painting, or possessed of some other long-desired advantage. An odd year or so will not pass without defects, and a visitation from the house proprietor, on the head of you, the unfortunate architect. Or you shall have yourself witnessed experiments at the manufacturer's yard—only to be nullified by adulteration at the dealer's. The latter case, however, we may pass over, as exceptional to the argument, though not to the experience. Indeed—whilst feeling and even strongly maintaining the necessity of improvement in all departments of practical architecture, and in houses especially so—we are surprised at the "run" that some materials or contrivances have had. Were we to look at circumstances restrictedly, we should ascribe to our professional friends the very opposite fault to that imputed against them. Acres of paving have been laid in basements and passages, with materials which seem to shrink and shrivel under atmospheric influence, or are unfitted for traffic that would wear away the hardest stone. One such material we know of, that, if it is not so combustible as wood, is not incombustible like stone; and it appears to us not even capable of bearing the heat from a bucket of hot water. Who again has not in his memory the failures in roof coverings, many of which have been the cause of law proceedings,—to the cost of the architect? Our pages have reported many such cases.

The conclusion, however, to which we arrived, is by no means invalidated. The necessity for keeping up with the inventive genius of the age still remains. The whole tenor of the arguments will show that, if sometimes mistakes result from causes which hardly could have been within mortal prescience, they result as frequently from causes which are within ordinary means of prevention. Further, means now available for testing new inventions, which might save individual labour, and consequent fear of responsibility through unknown risk, are left undeveloped. Commissions of inquiry into promising improvements, such as we lately instanced in the French Institute, are almost unknown in England; though such as have been issued, like that on iron as applied to railway bridges, have produced important results. And we believe that many mistakes would be avoided, were there in the case of our particular branch of study, more of relationship between the designer and the workman—similar to what has lately been advocated in reference to art, and on general grounds—from which so much mutual advantage would undoubtedly accrue. Obstructiveness to improvement indeed is found amongst too large a proportion of the class of building operatives; and others, clever in the department to which they are for the time restricted, forget that they are but contributing a part to the great machinery of a building, which must be devised on comprehensive *data*, and with reference to general principles of science. But the very fact of this general range with us, must necessarily prevent the particular aptitude for every thing, in every trade,—from bricklaying to gas-fitting and bell-hanging. The architect may, or at least should, possess knowledge of the mechanical or other scientific principles upon which unwittingly the workman acts; the latter unquestionably has the *means* of finding out particulars, and of registering—if he be observant—a sum of experience such as the architect can have no like facilities for obtaining.

Here, then, are means—of which advantage has not been taken, through which promising improvements might be tried with some approximate test to that of actual use; and thus might the architect, with less risk and more reason, give his efforts to the improvement of practical construction. There are, however, other means, which are perhaps little known to our readers, and which, if they are calculated to give additional *impetus* to invention, and therefore to increase the number of objects requiring attention, supply also ready information about particular inventions, together with opportunities for comparing them with other inventions directed to similar objects,—which comparison affords the best chance of coming to a right decision.

At the *Great Seal Patent Office*—established in the late Masters-in-Chancery Office—facilities are now afforded for collecting information about any patented invention from the reign of James I. to the present time. On the coming into operation of the new Act, on October 1, 1852, the whole of the important business connected with patents was brought from separate offices: the building now occupied is capable of extension; and the whole measure forms an agreeable variation on "the usual routine" in Government matters, whilst attended with no small advantage to the public. A great number of specifications, under the old law, indeed still remain at the Enrolment Office, Petty Bag Office, and the Rolls Chapel; but the necessity for inspecting these may, as we shall show, now in many cases be avoided. But, as regards the patents for inventions under the new law, copies of the specification of every one of these are printed,—with the drawings lithographed,—though not coloured,—and can be referred to by any one, without charge, within three weeks of the date of the first deposit; and copies can be purchased at the cost of printing and paper,—the average price being about eightpence. As these, however, form only a portion of what constitute the advantages of the place, we shall endeavour to set forth what those are which appear to us deserving of the attention of our readers. The principal of them is the *nucleus* of a library. To the reading-room all persons are admitted between the hours of ten and four—on writing their names, and some general indication of the object of search. The public collection of books is just now limited to a few donations; but we believe it is intended soon to include every important work in science, likely to assist inventors. Meanwhile, Mr. Woodcroft, the "superintendent of indexes, specifications, &c." (to whom we may perhaps attribute most of the improved arrangements which pervade the department) has placed on the shelves his own private library of reference—including sets of the principal patent journals, in which copies of many specifications may be found,—so saving the trouble of going to the Enrolment or other office. A number of specifications under the old law are being printed by the Commissioners, besides the series regularly going on. The whole of this mass of material is made immediately available to any one knowing the date of a patent, or the patentee's name, or the subject of it; and the inquirer can also find, if under the old law, where the specification is deposited, in which of the works of reference it may be found printed, and the different cases of law that have arisen about it. Thus, there are four kinds of catalogues and indexes,—one of the number, the Reference Index, having an appendix, which gives actual copies of the early patents, or those before it was customary to have specifications enrolled. A Journal of Proceedings, published twice a week, gives notices of applications for patents, and of all steps taken,—also of patents which have become void, or forfeited,—together with other useful information, of which the principal portion relates to patents of foreign countries.* The chronological index† has the names and dates in the order of time, and opposite thereto, the title of the patent, with its progressive number prefixed. At the commencement is a table of the years of sovereigns' reigns. The chronological index is of course continued for the patents under the present law.‡ The alphabetical index§ furnishes the names of patentees, the progressive number, date, and subject-matter of the patent in separate columns. There is a separate catalogue of the same kind for for 1852-3, and one for 1854. In the classified catalogue,‖ the subjects of patents are arranged under general classes, and further subdivided: the subject of the patent is given in the first column, taken from the title as recorded; then comes the number of the patent, the date, and in the last column the name of the patentee. A general synopsis of headings at the commencement, allows any subject to be found readily. The whole of this catalogue occupies two thick volumes, in imperial 8vo. small type. A glance through the pages showed a large number of headings for matters in which we were interested. At the first few leaves, we came to "Building Materials," — one subdivision, that of "Bricks, Tiles, and Chimney-pots," being over six pages of titles; another—"Cements, Compositions, Burning Lime," &c.—more than four pages; and so on. "Building and relative Processes," included "Laying Foundations, erecting Structures, &c." "Scaffolding and Ladders," "Walls," "Decorating and Covering Buildings," "Chimneys, Flues, and Guards," "Roofs, Roofing, Slating, Beams, and Girders" (the last, three and a half pages), "Ceilings and Cornices," "Flooring, Stairs, and Rails," and others.—The Reference Index* has the progressive number of the patent in a first column, and opposite to it such entries as "Rolls' Chapel" (designating where the patent itself, if under the old law, is deposited), "Newton's London Journal" (with number of volume, &c. to be referred to), "Mechanics' Magazine," &c. and so forth,—there being often five or six such entries. The whole number of journals, and "Reports" referred to, makes up a long list. The book contains other useful information. The litigated cases are in the Appendix. The patents under the old law amount to 14,359, from which some idea of the labour incurred by Mr. Woodcroft may be gathered. The last entry of a patent in the Chronological Index, happens to be in his own name.

Thus, any one who chooses to take the trouble, *may* now inform himself as to the nature of inventions directed to any of the objects with which the architect is concerned. Formerly, this would have been scarcely possible, even with the payment of heavy fees. We can, perhaps, hardly expect any one who is in search of the best kind of brick or chimney-pot, to read through patents, of which the titles fill six pages; but it is something to have got the first step towards a knowledge of what we possess. Hitherto hidden, so much fruit of mental industry applicable to the advancement of architecture has been scattered, and, for the time, lost; invention has succeeded invention for the same object,—often, of course, involving failure after failure,—all arising from the simple want which is now supplied, for the most part within a small room in Southampton-buildings, Chancery-lane. Further measures in development of the new mine, will, we are sure, be supplied. Already, the Commissioners of Patents have taken some steps which show what might be done for us. The whole of the specifications for reaping machines, from the first in 1799, have been published with their drawings, and, together with an appendix by Mr. Woodcroft, describing the machines in use from the earliest period to the present time. The same has been done with the specifications for fire-arms, cannon, shot, accoutrements, and general mechanical contrivances for warlike in uses. The earliest of these specifications dates 1718. The diagrams show amongst other things, that the "revolver" is not a recent invention. The Board of Admiralty have required the publication of the specifications of inventions for propelling ships; and by direction of the Home Secretary, there are at present in progress, the specifications, with their drawings, of patents for consumption of smoke in furnaces; also, for the making of drainage-tiles applicable to sewerage. Subjects more directly applicable to practical construction, may, doubtless, follow; and there is nothing at the Commissioners' office, to prevent the Architectural Publication Society itself from setting to work. The whole of the publications are to be had at the cost of paper and printing. Perhaps the greatest use of the abundant material which there is in the mere catalogues, is their enabling you to trace the progress of inventions for the same object,—such as there are despite the Patent Laws, and indeed without any culpable piracy. You may almost analyse the thoughts of inventors, and may, that way, to some extent, judge about the merits of their ideas.

Thus, then, we think there are means by which the architect may, without danger, give scope to the resources of science, and yet neither despise, nor be under the tyranny of *routine* or precedent. Since we wrote our opening remarks, a broad sheet of the leading journal has been laid before us, with an article inspired with the same views that, with a less able pen, we had striven to expound. It is indeed the fact, that in architectural practice, as in affairs of government and commerce, there may be two sorts of precedent-rule; to wit, that which supplies the useful groove through which the more or less mechanical, but inevitable drudgery of life must travel, to make much way; the other, that which weights down the intellect—inconsistent alike with progressive science, as with true art. It is the fact, however hard it is for practice, that precedent should be the anchor and stay of genius, yet ever ready to be thrown off. Reynolds spoke of "that false, and vulgar opinion, that rules are the fetters of genius;" adding, that "they are fetters only to men of no genius." We and our contemporaries have been but saying the same thing,—we as to architecture, others as to warlike operations and administrative reform.

Who does not recollect the hardship of the old patent law to inventors, and the restrictions upon all progress in consequence? Fees such as no ordinary mechanic could ever hope to raise, paid to a multitude of functionaries, from the Lord High Chancellor, to Mr. Deputy Chaff-wax; troublesome "forms" to be gone through, at nine different stages, in seven offices at opposite ends of the town. All this, happily, has been remedied. The inventor obtains a patent, applying to the whole United Kingdom, for 25*l.* and this gives him all the advantages for three years. Protection for four years longer may be obtained by the payment of 50*l.* more, and for the remainder of the term by a further payment of 100*l.* Thus, if an invention does not realize much for the patentee, it can be given up without having occasioned expenditure which has brought no result.

A very large increase in the number of patents applied for has been the consequence of the change. In the period from 1st October, 1852, to 31st December, 1853, there were of applications from England, 3,574; from Wales, 43; from Scotland, 251; from Ireland, 76; from France, 263; the United States, 57; besides many from other places. London alone made 1,833 applications; Manchester and Salford, 246; Birmingham, 213; Glasgow, 109; and Liverpool, 72. A number of these, perhaps, are abortive schemes; such as some may consider would not have seen the light under the old system. As regards the *proportion* between such inventions and those of a serviceable nature, we suspect, however, that circumstances are much the same as before.

Whatever the exertion which the general mass of inventions relating to architecture and building—whether patented, registered under the separate Act for the registration of designs, or otherwise—may require from the architect in keeping up acquaintance with them, no architect will desire that progress should be stayed because of the mere trouble which it gives him, in the way referred to, or as to the use of untried inventions; and none will feel that the help which is now afforded is otherwise than important to him, and advantageous to his art.

NEW CHURCH AT WESTMINSTER.—On the 13th instant the Bishop of London consecrated the recently-erected church of St. Andrew, St. Margaret's, Westminster, situated in Ashley-place, south of Victoria-street, Vauxhall-bridge-road, and which has been built at a cost of above 8,000*l.* by voluntary contributions.

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* "The Commissioners of Patents' Journal." By Authority. London: printed by Eyre and Spottiswoode: published at the Great Seal Patent Office.

† "Titles of Patents of Invention, chronologically arranged from March 2, 1617 (14 James I.), to October 1, 1852 (16 Vict.). (Printed and published by order of the Honourable Commissioners of Patents, under the Act 15 & 16 Victoriæ). By Bennet Woodcroft, Superintendent of Indexes, Specifications," &c. London: 1854.

‡ "Chronological Index of Patents applied for, and Patents granted, from October 1, 1852, to December 31, 1853." London: 1854.

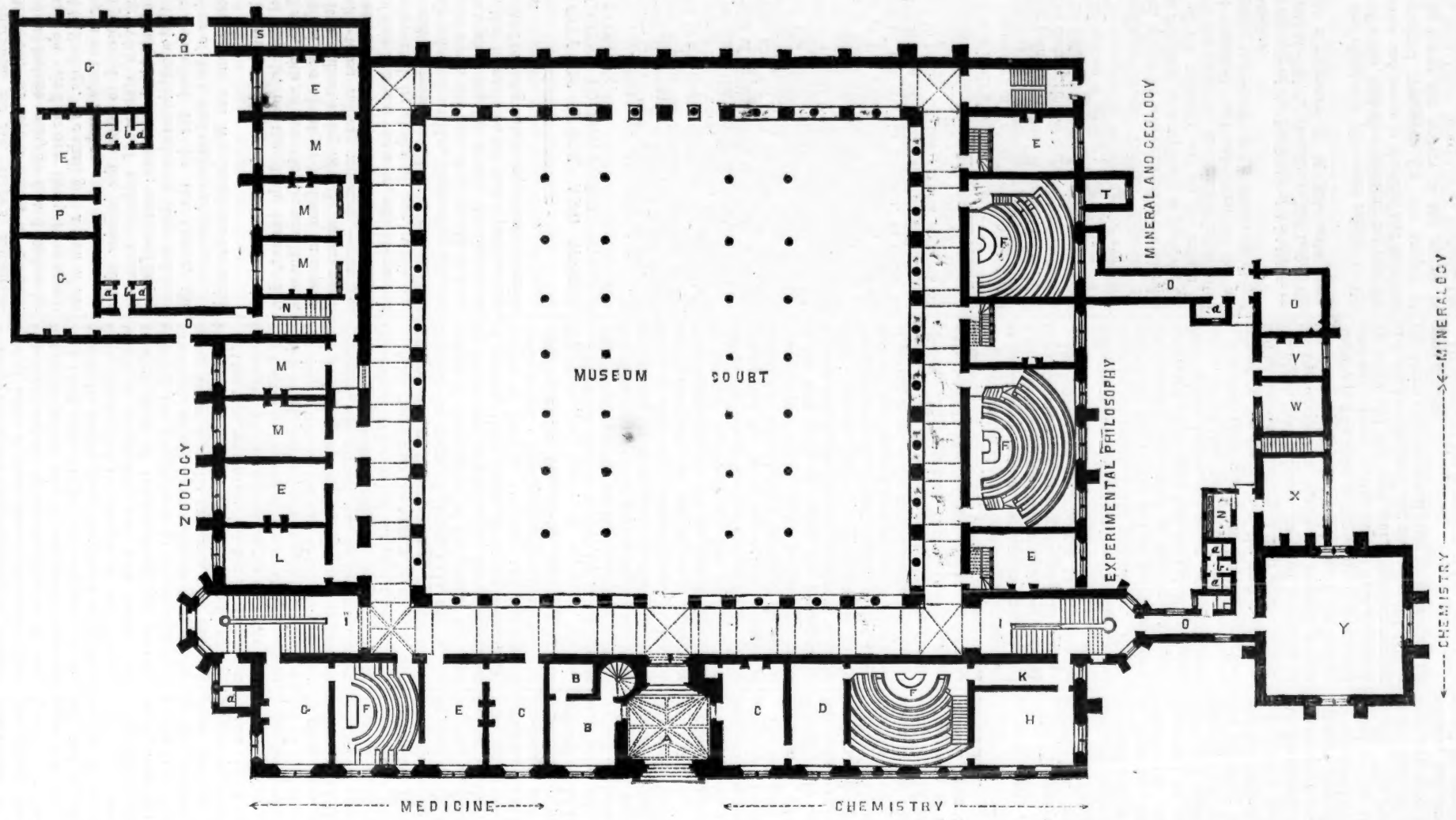
§ "Alphabetical Index of Patentees of Inventions, from March 2, 1617 (14 James I.), to October, 1852 (16 Vict.), by B. Woodcroft." London: 1854.

‖ "Subject-matter Index (made from Titles only) of Patents of Invention, from March 2, 1617 (14 James I.), to October 1, 1852, (16 Vict.), by B. Woodcroft," &c. London: 1854.

* Reference Index of Patents of Invention, from March 2, 1617 (14 James I.), to October 1, 1852 (16 Vict.); pointing out the office in which each enrolled Specification of a Patent may be consulted; the Books in which Specifications, Law Proceedings, and other subjects connected with Inventions have been noticed; also such of the Specifications granted under the Act of James I. as have been published by the authority of the Commissioners, &c. &c. By B. Woodcroft, &c. London: 1855.

REFERENCES.

A. Entrance-hall.
B. Porter.
C. Sitting-rooms.
D. Apparatus-room.
E. Work-room.
F. Lecture-room.
G. Dissecting-room.
H. Laboratory.
I. Principal staircase.
K. Passage.
L. Students' sitting-room.
M. Professor's work-room.
N. Staircase for anatomical and zoological department.
O. Covered way.
P. Macerating-room.
S. Private stairs to anatomical lecture-room.
U. Prælector's laboratory.
V. Balance-room.
X. Balance-room—furnace-room under.
Y. Large laboratory, 33 feet by 33 feet.
Z. Lavatories.
a. W.C.
b. Lobby.



THE OXFORD UNIVERSITY MUSEUM: GROUND PLAN.—Messrs. Deane and Woodward, Architects.

THE UNIVERSITY MUSEUM, OXFORD.

THE first stone of the new University Museum was laid by the Earl of Derby on Wednesday, the 20th instant, in the open ground known as the Parks. The accompanying plan of the Ground Story shows the general arrangement of the building, having the Lecture-rooms and apartments round three sides of the Museum-court, which is 112 feet square. The whole frontage of the museum is 320 feet 7 in. and the depth 178 feet 4 inches. On the right hand side of the Entrance Hall, in the upper floor (above the portion appropriated to Chemistry), is the general library, 81 feet by 25 feet, and on the left-hand side is an apartment for Mr. Hope's Entomological Museum, 82 feet 8 inches by 25 feet. The general lecture-room, 58 feet 6 inches by 33 feet, is on this floor over the portion appropriated to Zoology. We shall give a view of the building in an early number.

It is proposed to adorn the interior of the building with statues of eminent men, by means of individual donations; and Lord Derby stated, that a certain number of these had been already subscribed for by the Queen, the Batchelors of Arts, and undergraduates.

Messrs. Deane and Woodward are the architects.

At the annual meeting of the Oxford Architectural Society, on the 13th instant, Dr. Acland said, with reference to the new Museum, that Oxford was about to perform an experiment: it was about to try how Gothic art could deal with those railway materials,—iron and glass; and he was convinced, when the interior court of this Museum was seen, with its roof of glass supported by shafts of iron, while the pillars and columns around were composed of variously coloured marbles, illustrating different geological strata and ages of the world, and the capitals represented the several descriptions of Floras, that it would be felt that a problem had been solved of the greatest importance to architecture.

THE CITY OF LIEGE, AND WORKS RELATING TO THE PUBLIC UTILITY OF LONDON.

IN the year 1849, the attention of the civil authorities of Liége was directed to the rendering more healthy the crowded localities of the city, and to the improvement of the system of constructing the sewers; also to the paving of the streets, and the supply of water, as well for the service of public health as for use in private dwellings, and for the purpose of drinking. The desire of introducing into these different parts of the administrative economy the improvements already realized in the neighbouring countries, especially in England, determined the college of the burgomaster and magistrates to propose to the communal council to send the architect of the city to London, in order to study the system of public works of that great city, and to report on the various subjects all the information necessary to instruct the administration of the city of Liége with regard to works it was itself about to execute.

The Committee of Public Works decided that investigations should be made chiefly upon the following points:—

1. The distribution of water.
2. The different systems of sewers.
3. The system of paving; and
4. The arrangement of lodgings for workmen.

Accordingly Mons. Rémont departed for England, where he was engaged a considerable time in fulfilling, as completely as possible, the object of his mission; and on his return he arranged the numerous materials of information he had collected, and submitted to the administration the result of his observations and of his studies.

At a meeting of the Institute of Architects on May 21st, Mr. W. L. Donaldson laid before the Institute a summary of M. Rémont's statement.

The first chapter of his report relates to the supply of water, and after pointing out that the chief cities and towns in England and Scotland had organized companies for the supply of water, he traces the history of the supply in London from Peter Morrys, who founded the works at London Bridge, under the name of the Southwark Company, in 1581, and which was done away with in 1823, and united to the New River Company, whose works had been commenced by Sir Hugh Middleton in 1613, up to the present day. He gives a detailed account of the various existing water companies, and their amount of supply, with very minute statistical tables of the quantity and species of services in all cases. He also gives an explanation of the quality of the different waters, remarking that, according to the laws of health, water for drinking to be good should be clear, colourless, without taste, without smell, fresh in summer, temperate in winter, should contain atmospheric air and a small quantity of bi-carbonate of lime; in short, should not hold in solution either organic matter or sulphates of lime, nor any calcareous salt, the carbonates excepted. And after some further consideration of the subject he states, that one would understand from thence that the waters of the Thames, which is considered, and with reason, the greatest sewer of London, could not, notwithstanding the purifications to which they were submitted, satisfy the conditions required for being fit for domestic purposes. He sums up the chapter with the following observations:—

"One sees, moreover, that the English begin to understand that a good supply of water in a city cannot be the object of a speculative affair; that a supply without limit ought to be made at the simple price of the cost of the distribution; and that it can only be efficiently organised, regulated, and carried out by the magistrates who are entrusted with the very important interests of order and of the public health."

In his chapter on the sewers, he gives a short account of the Commission of Sewers established in the reign of Henry VIII. and of the system of management of the present day; and he enters very minutely into the construction of sewers, their forms, their inclination, the system of flushing, trapping, and the cost of construction. He also describes the tubular or pipe-drains for connecting houses with the sewers.

The fourth chapter is upon the carriage-ways and foot-pavements, and in this he enters into a full examination of the granite paving, the wood paving, and the Macadamizing, which he says is called in Belgium "Empierrement." He minutely describes the two modes of laying the granite pavings, the one in lines perpendicular to the axis of the street, the other in lines oblique to this axis, and in an angle of 45 degrees; and he enters into a full discussion of the subject, including in it the cost of the various modes of paving. He makes particular mention of the new mode of laying the paving at the London and North-Western terminus, which he calls "pavage Taylor." With respect to the foot-pavement, he speaks highly of the pavements of London, and he considers that the mode of paving is one of the most important and most useful works that this great city has accomplished. He remarks that in some narrow streets, where two carriages could not pass each other without sacrificing the convenience of the foot pavements, the carriage-way is lessened so as to allow of only one carriage to proceed, and a wide space, either at the middle or at the end, is left to admit one carriage to pass the other.

In chapter five he proceeds to describe the mode of cleansing the streets, and he traces the different modes of effecting this from the earliest times to the system of the present day. He describes the water-carts, and the patent machines for cleansing which used to operate in Regent-street, and which were first used at Manchester, Birmingham, Leeds, and other large provincial towns, before they were so in London.

The sixth chapter is devoted to the important subject of the dwellings of the working classes, and he traces the history of their establishment. He urges, that a house arranged according to the requirements of health and comfort, contributes essentially to the well-being of the family; inspires it with ideas of regularity, of peace, and economy; causes to arise insensibly in it respect for order and the laws, and altogether causing in it the knowledge of the necessity of fulfilling the duties that the social state imposes upon all good citizens.

He describes the formation of the Society for Improving the Condition of the Labouring Classes some years since under the patronage of Queen Victoria and the Prince Albert. He traces the progress of the society in not confining its operations to the cities, but extending itself to the country and erecting model cottages, of which several designs are given. In his observations he shows how much is due to Mr. Roberts, the architect, for his attention to the subject, and he refers also to Mr. George Beck, the architect of the St. Pancras dwellings for families.

Chapter seven is on the establishment of baths and washhouses. He traces, from the first establishment of eight baths and twenty washhouses at Liverpool, the progress of this system to the great establishments in London in the present day. The details upon this very interesting subject are very full and equally minute as on the other matters of inquiry, and are illustrated by many tables and drawings.

He calls particular attention to the extensive employment of slate in the baths and washing places, as a substance not susceptible of change by the influence of the hot and damp atmosphere, and not liable to be impregnated with deleterious and offensive substances.

The eighth chapter is on the expedients in cases of fire.

He mentions the regulations in parishes, by Act of Parliament, to have two pumps always in good order, and in consequence of the insufficiency of the parochial arrangements, the subsequent establishment of the Fire Engine Brigade, which was founded and is supported by the different Fire Insurance Companies in the metropolis. He describes also the Society for the Protection of Life in Cases of Fire. The details he gives of the Fire Engine Establishment and its system of regulation are very full, and interesting to those who may not be acquainted with its operations; and the engine used in London obtains his warmest approbation. The fire-escapes also engage largely his attention.

At this part of the work he enters into a short account of the London Police, the whole system of which, and the conduct of the force, he warmly applauds.

The ninth and closing chapter is upon various subjects. First, the improvement of the sanitary condition of dwellings, of which the drainage forms a close inquiry and of very minute and lengthened details. The inscription of the names of streets does not escape this architect's attention, and he particularly notices the enamelled porcelain lettering fixed into a metal frame.

The extensive use of zinc in the present day attracts his attention, and he points out the difficulties to be guarded against in the use of this metal on account of its expansion and contraction under different temperatures.

How far the authorities of Liège have benefited their city by the information so largely given is not stated, but every traveller will admit that Liége is far from being a model town in any one of the points which are so fully reported upon and practically illustrated by M. Rémont.

ON CHRISTIAN ART.

ON Thursday in last week, Mr. George Scharf, jun. concluded his series of eight lectures on Christian Art at the Royal Institution, Albemarle-street. They were numerously attended, and, what is very unusual in a course of lectures, the audience did not diminish towards the conclusion. Each lecture was illustrated by a series of large diagrams of views and copies of paintings and sculpture, many of them coloured and elaborately finished. The following heads may serve to record the principal subjects treated of in the course:—

Lecture I. treated of the catacombs of Rome and churches of Ravenna. Mr. Scharf explained, in commencement, that his object was to exhibit a general view of the progress and changes in art connected with Christianity, from the earliest period to the times of Raffaelle and Michel-angelo. The increasing interest that was taken in the study of ancient paintings, not only for their own sake, but as illustrative of history, of science, and previous conditions of life, was especially manifest in several collections recently

formed by private individuals, and even in the National Gallery, where certain antiquated gold-grounded pictures had been introduced. Under these circumstances, he felt that some explanation of the subjects usually treated, the significance of the symbols and leading peculiarities of the more important painters and sculptors, might not be unacceptable.

He recognized the influence of the efforts of former writers and collectors of art, especially D'Agincourt, Lanzi, and Ottley, and invited attention to the important and still existing galleries of Lord Ward,* Mr. Rogers, Mr. Maitland, and Mr. Davenport Bromley. These collections are especially valuable, as containing genuine specimens of the best Italian masters, from the time of Giotto to Raffaelle and Michelangelo.

For historical information, his hearers were referred to the foundation of all art-biography, Vasari's "Lives of the Painters," and memoirs by Ghiberti, the sculptor.

In commencement of his subject, Mr. Scharf exhibited views of the interior of some of the Roman catacombs, especially the so-called Baptistery of St. Pontianus, and a chamber in the catacombs of St. Calixtus, where the wall-paintings might be descried in faded colours, but retaining all the grandeur and severity of the best times of ancient Pagan art. Many of the decorations exhibit a striking resemblance to the Etruscan excavated chambers, and the predominating colours, purple, green, and black, produced a remarkably solemn effect.

The love-feasts, the expressive attitude of prayer, and historical scenes from the Old Testament, were not confined to painting: they extended to sculpture, for the most part bas-relief, and to various glass vessels, many of which were adorned with beautiful figures and patterns, in flat gold, upon a surface of transparent glass. These are especially well figured in M. Perret's new work upon the catacombs, but the lecturer took the opportunity of mentioning that the mural paintings were a little too much *beautified* in M. Perret's representations. All these works were to be attributed to the early ages of Christianity. There are evidences of the changes that took place in their relation with those who held dominion in the ancient city. At times their symbols were more mysterious, and occasionally their types were more clearly set, so as to explain one another; but it was not till a comparatively late period that the figure of our Saviour was directly represented. During the infancy of the Christian religion any intruders into these subterranean sanctuaries would detect nothing at all unusual to what they were accustomed to see in other chambers for sepulture, and for celebration of rites connected with the memory of the departed. Even the form of the cross was not conspicuous! If it occurred it was not, in early times, to be seen alone. It was combined with the letter P, but more usually with the X, or St. Andrew's cross, forming, in fact, the first letters of the name of Christ in Greek. The A and Ω, alpha and omega, were of frequent occurrence. Our Saviour was first symbolized as the vine, as Orpheus, and as the good shepherd. Noah's ark was the type of the church. Jonah escaping from the whale, after three days, symbolized the resurrection of the Saviour. An important medallion from the centre of the ceiling was shown, which, although without painted glory or distinction of dress, is at once recognized as the earliest known picture of Christ. It was taken from the catacombs of St. Calixtus, near Rome, on the Via Appia.

After the Emperor Constantine made public profession of the faith, and Christianity was universally adopted, the art, so long cherished underground, emerged, and soon displayed its influence both in painting and architecture. The mosaics of S^ta. Costanza at Rome, executed upon a white ground, evince remarkable grace, and show how skilfully a Pagan subject of vine leaves, formerly attributed to Bacchus, could be applied to a Christian parable.

* Lord Ward's valuable collection of pictures is still at the Egyptian Hall, Piccadilly, open to the public free of charge, every day of the week except Monday. Many of these ancient paintings serve as prologues to the pictures in the National Gallery, and it is to be regretted that his lordship's liberality is not more generally known, as many persons would gladly avail themselves of the privilege.

When Constantine removed the seat of empire to the shores of the Bosphorus, numerous works of art were required which drained Rome of the best workmen, and, for the first time, embellishments, both imperial in splendour and Christian in purpose, were produced.

The adjacent nations of the East were not long before exercising a powerful influence upon the Constantinopolitan, or, as they called themselves, Byzantine artists. The dome-shaped circular buildings, with pointed arches and mosaic wall decorations, sufficiently attest this in the time of Justinian (A.D. 537). The foundation of the order of St. Benedict, in the monastery of Monte Casino (A.D. 529), laid a means for the preservation of learning and many useful arts,—a security the more important, as the Eastern nations, called, indifferently, Arabs, Moors, and Saracens, were rapidly spreading along the southern shores of the Mediterranean, and in the first ages carrying devastation with them. The approach of the millennium—the year 1000—brought terror and alarm, and most persons, thinking the end of the world at hand, desisted from all undertakings or duties that had special reference to the future. The Saracens, at this juncture, possessed themselves of the Greek works on science, which they translated into their own language, and then destroyed the originals; but even by this means many scientific works have been preserved, and a practical experience in useful arts especially retained.

The excellence of art in the early period of the Roman empire was illustrated by tracings in colours, from the paintings at Pompeii. They were contributed by Mr. Digby Wyatt for the occasion. The lecture terminated with a minute description of the celebrated sarcophagus of Junius Bassus, who was prefect of Rome in 359: it is especially rich in sculptured compartments of Christian subjects, and had been discovered in the foundations of the Vatican about 1595.

LECTURE II.

Having illustrated the development of painting and sculpture, Mr. Scharf displayed a copy of the Pompeian Battle of Issus, as the finest antique specimen extant of Picture Mosaic. The interior of the Chapel of Galla Placidia, at Ravenna (A.D. 450), exhibited the free use of mosaics for mural decoration. The shape of this chapel is cruciform, the mosaics all on a dark blue ground, and in very gay colours.

The mosaic representing the Baptism of Christ, upon the centre of the ceiling of the Baptistery at Ravenna (A.D. 451), afforded a curious parallel with the same subject shown in the chamber of the Catacombs of St. Pontianus. The lecturer proceeded to exhibit the various mosaics of the ancient churches of Rome and Ravenna, explaining the position they usually occupied upon the concave heading of the niche or tribune, on the flat wall space around that recess, which is called the arch of the tribune, and of a second arch, which in most churches separated the presbytery from the nave, and was called the arch of triumph. Floors were richly inlaid with varigated marbles, but all pictorial mosaics were reserved for the walls.

The arch of triumph of S. Maria Maggiore, at Rome (A.D. 440), is remarkable, as being adorned with an infant Saviour, seated *alone* upon a throne, whilst the Virgin and angels stand reverently around.

The earliest representation of the Madonna and Child enthroned, is a mosaic in the church of S. Apollinare Nuovo, at Ravenna (A.D. 556).

A colossal portrait of Christ, in the act of blessing, adorned the arch of triumph of S. Paolo Fuori le Mura, at Rome (A.D. 450), constructed by Pope Leo the Great.

The position of the fingers in act of benediction was different in the Greek and Latin church. Both left three fingers fully extended, in allusion to the Holy Trinity, the other two bent as close to the palm as possible. In the Latin, the thumb and two first fingers were extended, and the third and fourth bent down. In the Greek, the tips of the thumb and third finger were joined, so as to leave the first, second, and fourth fingers extended. Much had been written upon the significance of each finger, but such is the invariable custom, and a simple statement of the case.

The Roman Mosaics of the Tribune of SS. Cosmo and Damiano, A.D. 530, were excellent specimens of the art of the period; the ground still dark blue, with the high lights on the draperies and edges of the clouds, in shining gold. The art of mosaic working had evidently declined in 630: the figure of St. Agnes was without middle tints: all careful regard to surface and modelling of forms had been lost: the features were indicated with coarse black lines, and the colour on the cheeks no more than crude patches of red, without the slightest blending into the rest of the complexion. The background of the figures was no longer blue, but bright gold. Mr. Scharf had prepared enlarged copies from paintings in various manuscripts, to show that the art of illustrating books kept pace with the changes and characteristics of larger decorations. The paintings of the Frankish style of art afforded, about the beginning of the ninth century, a curious contrast to the art then practised at Constantinople and in the East. The Frankish was all composed of crude earthy colours, very opaque, and of brick red colour in the flesh, whilst the Byzantine had a peculiar greenish tint, as a groundwork for the flesh, and the countenances were made solemn; that of the Saviour especially stern and ascetic. This was the result of a doctrine held at one time, viz. that as the Saviour had assumed a human form, he had selected one positively mean and repulsive, so as to increase, as it were, the mystery of the incarnation. The Russians and other barbarian nations being converted to the Christian faith, seized upon this point of view, and have ever since that time been distinguished by the meagre and ugly forms of their pictures.

The pointed arch was introduced from Kairwan into the South of Italy, by the Saracens (A.D. 827); and soon after, about A.D. 829, Theophilus erected a splendid palace at Constantinople, which was an exact model of a Saracenic one on the banks of the Tigris. This direct imitation gave great offence to the people at the time. The Mosaic decorations of Monreale, in Sicily, might be regarded as a most complete example of the Byzantine mode of treating pictorial subjects. Numerous Greek MSS. are preserved, in which the first pages consist of a series of pictures, occupying the full height; and sometimes on both sides of the leaf, illustrating the life of our Saviour and the Virgin Mary. The subjects are almost always the same, and always composed in the same way, the only difference being in the arrangement of colour and degree of finish. The Monreale Mosaics are in perfect accordance with these conventionalities; but some of the figures are conceived with extraordinary grace, and the draperies even effectively arranged.

The lecturer then explained the principal subjects in detail, comparing them with the sculpturesque treatment of a former age.

Pictorial representations of the Last Judgment were introduced into church decorations soon after the year 1000; as people, having escaped the expected doom, were beginning to forget the future, and the priests employed the subject as a reminder.

The contemporaneous erection of buildings in France, Germany, and England, occupied a considerable degree of attention; and the lecturer dwelt strongly upon the fact of the excellence of sculpture in England, before the appearance of the Pisani in Italy.

This portion of the lecture was illustrated by a series of beautiful large drawings by Flaxman, which he had prepared and used for his own lectures at the Royal Academy. Many of them have been published in the volume of his Lectures. Miss Denman had, with her accustomed liberality, afforded the free use of these treasures. Some casts of very beautiful ivory carvings, both Greek and Roman, evinced the elaborate style of finish attained in these ages. They were exhibited by Mr. Nisbett. A series of illuminations traced from MSS. in the British Museum, and from the collection of the Duke of Devonshire, marked the advance of miniature-painting,

LECTURE III.

The foundation of the mendicant orders of S. Francis and S. Domine exercised no small

influence upon art, inasmuch as their deeds and sufferings have afforded an inexhaustible source of subjects for representation. Niccola Pisano was employed upon the tomb of S. Dominic in 1234, at Bologna; and this distinguished sculptor here displayed his wonderful abilities, which rose beyond the miserable chisel-work of his contemporaries at the sight of an antique sarcophagus sculptured with figures then in front of the Duomo at Pisa.

After the death of S. Francis in 1226, a magnificent church was erected to him at Assisi, the work of a German, and the first specimen of Pointed architecture north of Rome. It was completed in 1230. The painters of the day, chiefly Greeks, were employed in its decoration.

Greek art—that is, Constantinopolitan or Byzantine—still prevailed; and, with the same pertinacious adherence to precedents and conventionalities, everything became traditional; so that nature, the source of all art, was utterly forgotten, and consequently the significance of many touches became lost, frequently so perverted as to be no longer recognizable apart from the position they bore to the figure or place in the picture. Manuscript paintings clearly show this, and the British Museum has a rich store of them.

Giunta Pisano and Guido da Siena were old painters who wrought under the baneful influence just described; but the former master struggled for emancipation and partly attained it by studying from the living model. He painted a portrait of St. Francis, which still hangs in the sacristy of the church of the convent at Assisi. Cimabue, born of noble family, preferred when a boy to watch the painters working at the Dominican convent of S. Maria Novella, to studying literature, for which purpose he had been placed there. He ultimately painted a Madonna, so novel in style, so large, and so impressive, that the picture was carried in procession through the streets from the artist's house to the church for which it had been destined.

Cimabue's fame rests greatly on the circumstance of his having met with a lad who was tending sheep, and that he at once perceived his talent for drawing, which being carefully nurtured produced one of the most remarkable artists of Italy: the name of the youth was Giotto. His master, and parent by adoption, Cimabue, seems to have long been aware of the fallacious principle under which the artists of his day had been working, although he may not have been able to throw off the trammels imposed by his early instructors. He taught the boy, however, the course he would have pursued himself, and fully developed his wonderful dramatic powers.

The style of Giotto was perfectly novel. He threw aside the greenish complexion of the flesh, displayed great variety of character in his heads, most being from the life: he painted the portrait of his friend Dante about 1300, which still exists. The action of his figures was always natural, and sometimes boldly foreshortened; his execution slight and sketchy: indeed, his pictures were never highly finished, but generally well composed for the period. His mosaic of the "Navicella," a ship in a storm, with Christ and St. Peter on the waves, is universally celebrated. It is preserved in the vestibule of St. Peter's at Rome. Pietro Cavallini, who assisted in the execution, is said to have been also employed at Westminster. At all events, the mosaics of the tomb of Henry III. and shrine of Edward the Confessor afford an important example of the decorative ornament of the period. A curious gold-grounded mosaic, by Solsternus (A.D. 1207), marks the decline of art. It is on the front of the Duomo or Cathedral of Spoleto, and represents the Saviour seated on a throne, between the standing figures of the Madonna and St. John the Evangelist. A series of beautiful drawings of the relics of St. Cuthbert, at Durham, were exhibited by permission of the President and Council of the Society of Antiquaries. They illustrated the state of embroidery in this country about the beginning of the tenth century, and were very interesting, in comparison with the celebrated Bayeux tapestry. The society also contributed a curious old Greek painting, procured from Syria by Dr. Clarke, the traveller, which afforded a specimen of the traditional mode of representation.

The works of Giotto, in addition to Mr. Scharf's diagrams, were fully illustrated by large tracings from the originals, and a series of drawings from his frescoes, that had been prepared for publication by the Arundel Society, and were generously lent by the council on the present occasion. They were chiefly copied from his frescoes in the Arena chapel, at Padua.

FREEHOLD LAND AND BUILDING SOCIETIES.

So extensively has the system of popular subscriptions to benefit societies been carried out, that to give a digest of their action would require a committee as able, as energetic, and as tedious as the inquiry into the war management in the Crimea. In London there are over one hundred, and in the counties of the kingdom many more. The object of the first founders, from Robert Owen downwards, has, no doubt, been benevolent; but the plan has not been followed out, in all instances since, in that pure spirit of benevolence or mistaken philanthropy. What Socialist dreamers took up in fervour for the good of the multitude, has been adopted as a matter of business by shrewd, calculating traders; and these, in too many instances, have turned to account the fascinating delirium of artizans and mechanics to realize a real estate, and vote for the representatives in Parliament, by the too often penal sacrifice of 4s. 6d. a month out of their hard earnings.

It was easy for a knot of residents in any district to form a committee and appoint a secretary for the receipt of subscriptions: the rules were cut and dry—the regulations all in print—the indemnity to the movers and agitators complete. Mr. Tidd Pratt made these all right. The Act of Parliament secured all parties by a perfect immunity from responsibility; all from the defaults of their co-directors, and almost, if not wholly, from even their own laches!

Here was a temptation to do business. If ten acres were purchased at 200*l.* an acre, nothing forbade that it should be valued at 400*l.* (or 4,000*l.* for the ten acres), and subdivided at that ratio. The argument in all cases is, there is no mode of obtaining small freehold plots at the average rate of large tracts, and so far it is true; but there is a possibility of purchasing by a company which *will employ its own delegates* at the *actual selling price*, and of distributing the same for divisional proportionate sums. Whether real advantage has resulted to the public from the growth of these societies, is now a question.

Some estates there are within seven miles of London, which have been allotted, balloted for, won, and bartered, over and over again, upon which not one house has been erected out of fifty plots. Of the holders, many have realized handsomely by a timely transfer; the greater portion of the subscribers still retaining their long-coveted freeholds, and either from inability to build, or having discovered that a villa 16 feet by 25 feet, on a plot of 20 feet by 100 feet, at Ponder's-end or Finchley-common, would for themselves be useless and unavailable, and for their heirs and successors a profitless investment.

Such is the land of promise, in the issue, about the metropolis: farther afield the aspect of things is no better, save and except that here and there philanthropists of the Snig's-end kidney, who are prone to apostrophising "a bold peasantry, their country's pride," &c. &c. may felicitate themselves on the view of a few huts, cottages, boxes, hovels, and mud edifices, in the most fantastic confusion, at jars, angles, and cross purposes; presenting no doubt a picture of perfect freedom from all order or restraint—no roads, no sewers, and no harmony but of that negative kind which is assured by the absence of animation, and the liberty of free progress to every man who is his own architect.

On the first promulgation of the Freehold Land Societies, the whole class to whom the scheme was addressed, elate with the anticipation of certain freeholds for their heirs for ever, by the sacrifice of only 5s. a month for ten or twelve years, inflated with the importance of being invested with the elective franchise, flocked in by the 100,000 to get their names enrolled. The early societies profited by the rage: thousands of acres were bought, and the game of shares, or the traffic arising for their transfer, then began in earnest: a few gained by sale, still fewer realized the foundation of a heritable crib; but the great mass of prizes remain to this hour profitless and unreal.

What amount of good have all these distributions and amorcellements of freeholds effected? Look at the estate (Lord Cottenham's) near Wimbledon,—look at Finchley, or, indeed, any of them, and determine!

To win the basis or privilege of a foundation is not to acquire the means requisite for building: the site is not the fourth part of the value and essential cost of building: how is a poor man (on poorer security) to obtain that? At this crisis neither the money-changers of the Temple nor of *Walbrook* would look at the gage. Many of the societies are nearly done up, or steeped in mortgages.

A few of the many applications made to the magisterial bench for the restoration of subscriptions have come to light: the needy shareholder, unable to pay up his book and quarterage, redemanded his deposit. Alas! the money is spent, or invested in irremediably mortgaged estates. If he cannot await the lottery, he must bide his time for the definite acceptance of any balance that may be left after the deduction of periodical fines. Q.

FALL OF CORNICE, WOOD-STREET, CHEAPSIDE.

ON Saturday last, an elaborate stone cornice which had been placed on the front wall of a large warehouse, now in course of construction under the direction of Mr. G. Somers Clark, architect, for Messrs. Munt and Brown, in Wood-street, London, fell to the ground, and unfortunately killed a poor man, named James Thompson, who had brought some lime to the premises in a cart. Providentially, the other men had left the works for breakfast.

The cornice, with consoles, foot moulding, &c. was 7 feet 6 inches high, and projected at the top 4 feet 3 inches, tailing into the wall 1 foot 11 inches, and in other parts more; upon which the principals of the roof and a blocking cornice were to have been placed. Upright iron nut and screw bolts were introduced at intervals, from the string to the top of the bed-mould, to tie the whole of the cornice together.

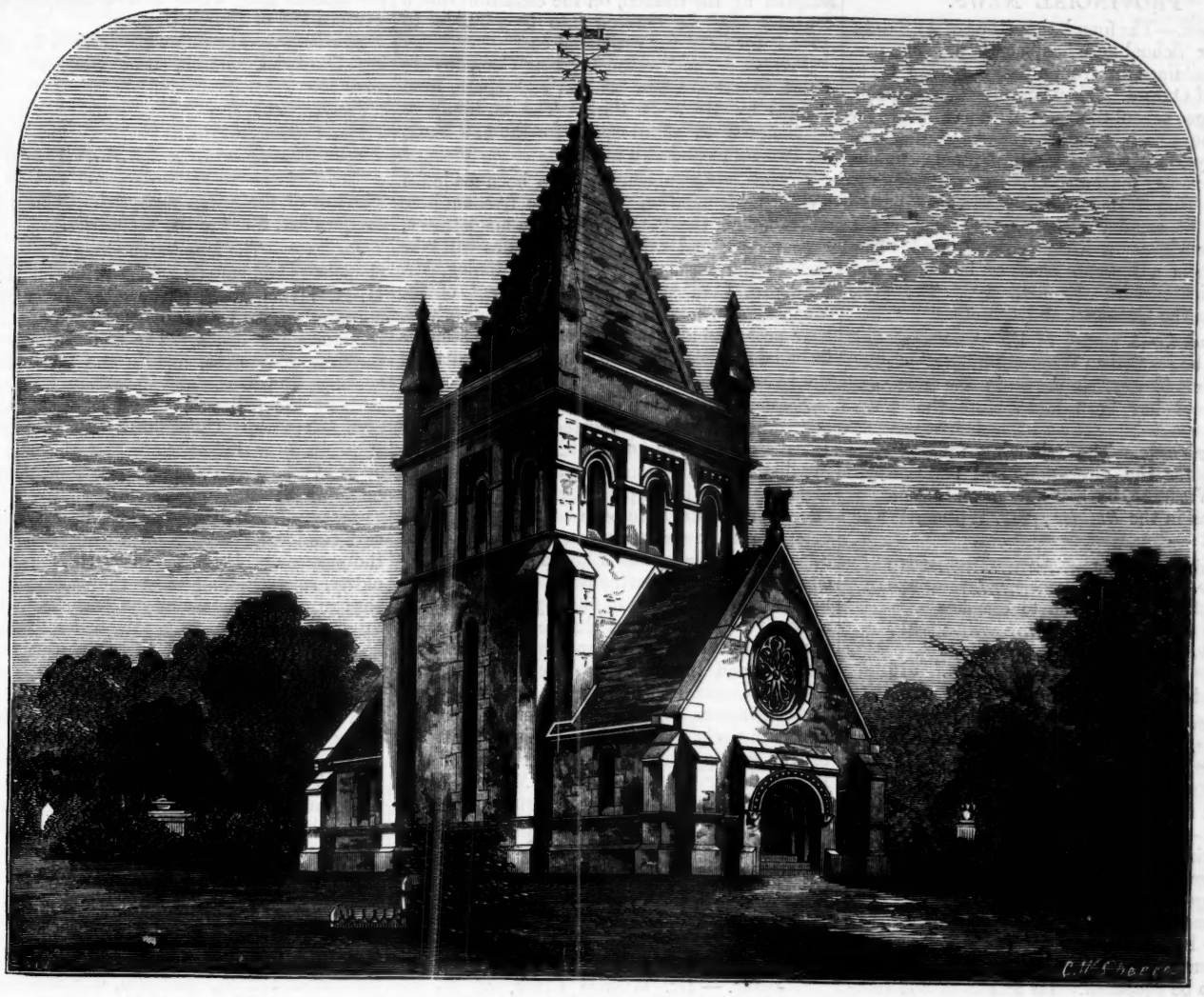
At the inquest the architect said, he had advised the builder's foreman, during the execution of the work, to shore up the cornice till the upper part was finished; but it had not been done. The jury returned the following special verdict:—

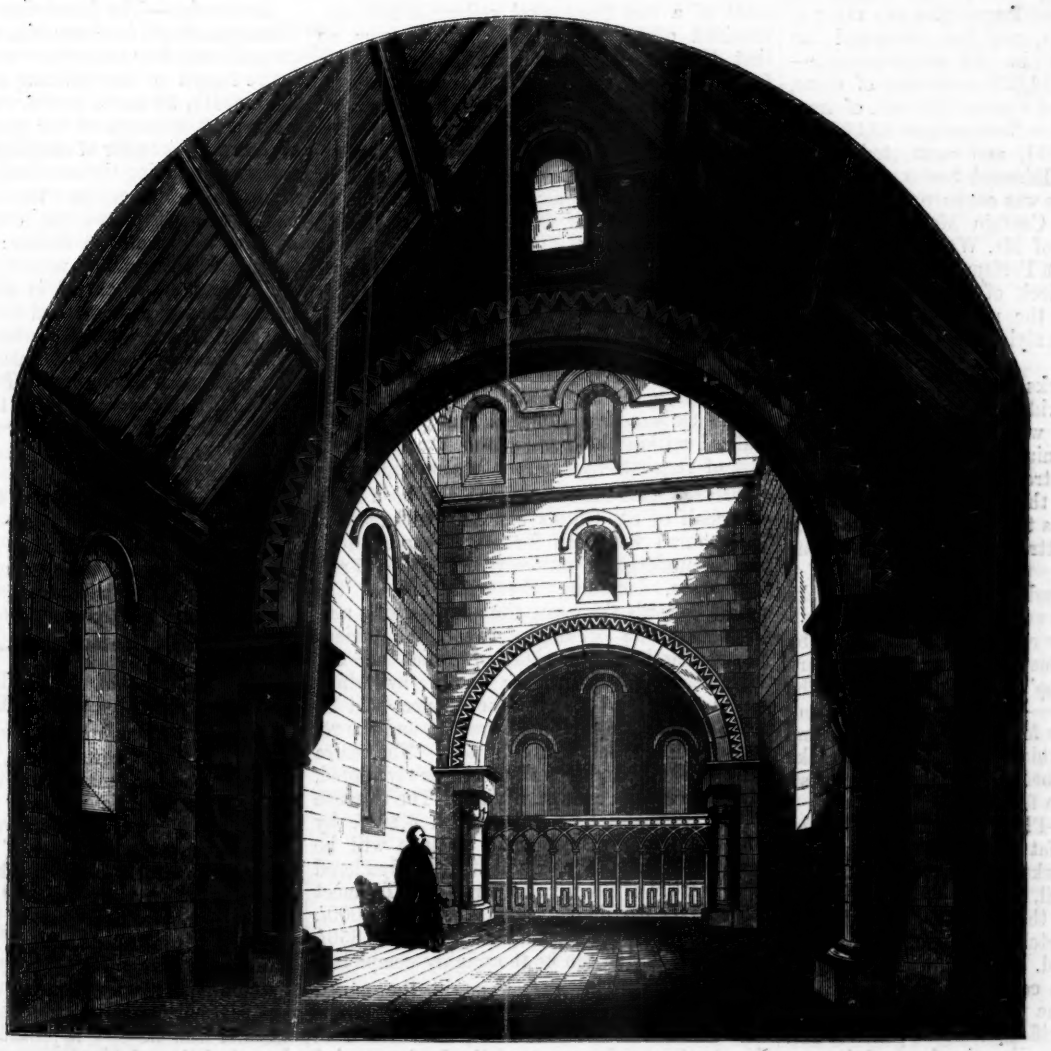
"That the deceased was accidentally killed by the falling of blocks of stone, or other solid substance, from a building in course of erection on the West side of Wood-street, in the city of London; and the jury cannot separate without expressing their strong conviction that due precaution had not been taken in shoring up the cornice of the building referred to, while under construction; and that the tie-bolts on which the architect and builders relied, were ineffective for the security of the work and the safety of the public; and they further consider that such unusual projections in narrow streets are highly objectionable."

Messrs. Lucas are the builders engaged.

ROCHDALE CEMETERY CHAPEL.

WE have already described the Episcopal chapel now in progress in the Rochdale cemetery. It is in the Norman style, and is arranged in the form of a parallelogram, 65 feet long by 29 feet wide, including the walls, from the centre of which, supported on two massive semicircular arches, will spring a broad Norman tower, 29 feet square, pierced with twelve windows. The interior is divided into three parts by arches and stone shafts; the former all ornamented with a characteristic moulding. The architect is Mr. R. Moffat Smith, of Manchester. Let us add that the walls are all 2 feet 6 inches thick; the whole of the exterior is faced with Yorkshire stone in pier-points, laid in courses; and the ashlar for the dressings is from Burnley. The cost, we are told, including all extras, will be about 950*l.*





EPISCOPAL CHAPEL, ROCHDALE CEMETERY.——MR. R. MOFFAT SMITH, ARCHITECT.

PROVINCIAL NEWS.

Bloxham.—The foundation-stone of All Saints' Grammar School here has been laid. The proposed buildings are from a design by Mr. G. E. Street, of Oxford. They comprise, chapel, hall, two large school-rooms, six dormitories for twenty boys each, separate rooms for the sixth-form boys, six sets of masters' rooms, library, common room, museum, oratory, and singing-school. They form a large quadrangle, with a cloister. A smaller cloister, south-east of the chapel, encloses a little burial-ground. The offices form a separate block of buildings, but communicate with the hall, &c. The style chosen is the Geometrical Decorated.

Gravesend.—A model of the monument proposed to be erected on Windmill-hill, to be called "The Alma Tower," is shown in the town, and the project has been laid before the town-council.

Sittingbourne.—The following tenders were received for the alteration and additions to Milton Vicarage, by Sittingbourne, in Kent, as advertised in the *Builder;* Mr. William White, architect:—

Jennings, London	£710
Dyne, London	580
Couch, Maidstone (and to complete in twelve weeks)	517
Cobb, Maidstone (and to complete in ten weeks)	515

The last tender was accepted.

Shorncliffe.—The huts at Shorncliffe, near Sandgate, for 5,000 men, are by this time probably completed. The sinking of the wells and the sanitary arrangements for the camp, however, are still in an unfinished state.

Dover.—The casemate barracks at the Castle overlooking the sea are in progress, and in a short time there will be accommodation there for a large number of troops.

Portsmouth.—A new dock was opened on Tuesday before last in Portsmouth Dockyard, by the entrance into it of her Majesty's new yacht, to be coppered. Its length is 335 feet; breadth, 82 feet; depth, 29 feet; ditto at high water, 23 feet (spring tides); width of entrance, 70 feet. It is 50 feet longer than any other of her Majesty's docks, and has consumed the following materials in its construction;—3,000,000 bricks, 152,359 cubic feet of stone, 94,783 cubic feet of timber, 729 cwt. of iron-work; and it has cost in the aggregate 63,000*l.* It was designed in 1851, and contracted for in same year by Mr. Edmund Smith, C.E. The work of construction was commenced under the superintendence of Captain Mould, R.E. and finished under that of Mr. Wood, C.E. clerk of Government works in Portsmouth Dockyard. It is the south inlet dock of the steamer basin, and, as docks take the name of the first ship admitted, this will be styled the "Royal Victoria and Albert Dock."

Bristol.—The works at the Bath bridge are progressing. On Friday in week before last the first of the iron ribs was brought up the river, and on Saturday evening floated to its permanent position on the buttresses. There will be no danger, it is said, of this bridge sharing the fate of its predecessor, as there will be a clear space from buttress to buttress. We shall give some particulars.

Taunton.—The tender of Messrs. Shewbrooks and Savery, for the erection of a wall and railing around the new cemetery, was accepted by the Joint Burial Board of Taunton, St. Mary Magdalen, and Bishop's Hull. The amount of the tender was 690*l.*——The ceremony of laying the foundation-stone for the new shire-halls and judges' lodgings, which was announced to take place on Tuesday before last, has been postponed for probably a fortnight.

Wolverhampton.—Plans and estimates for the erection of a new fat pig market in connection with the cattle market here have been laid before the town council, and the estimates of Mr. James Palmer, for the builders' work, at 674*l.* and of Messrs. Fletcher and Co. for the iron-work, at 803*l.* 4s. 5d. accepted, these being the lowest tenders. A committee has been authorised to carry out the proposed work in accordance with the specifications and plans of Mr. Banks, architect.——For the front of the new town-hall, the design of Mr. Veall has been adopted by the council, on the condition that a contract shall be entered into by a builder to erect it for 891*l.* the estimated cost.

Preston.—The Preston Banking Company are about to erect a new bank in Fishergate, from designs by Mr. J. H. Park. The buildings to be removed to afford space for the new bank, are two shops and two offices.

Oldham.—Arrangements have been made for laying the foundation-stone of the Lyceum here on Monday, the 25th inst. The magistrates, Freemasons, and other public bodies will take part in the ceremony; and Lord Stanley, Mr. Fairbairn, C.E. and the vice-president of the Manchester Chamber of Commerce, and others, have promised also to be present. The stone is to be laid by Mr. James Platt, the president of the Lyceum.

Shipley.—The General Board of Health having approved the plans submitted by the Shipley Local Board for supplying Shipley and adjoining districts with water, and authorized a loan of 14,000*l.* for the purpose of carrying them into effect, the works have been commenced. They comprise a compensation reservoir of about 8 acres in extent near Eldwick; a pure water conduit of glazed earthenware tubes, 15 by 20 inches within, upwards of 4,000 yards in length; a supply reservoir, about 220 feet diameter and upwards of 20 feet deep; and the pipeage therefrom to and through the districts to be supplied. Messrs. Swire and Blair, of Shipley, are the contractors for the compensation reservoir and pure water conduit; Mr. Lapish, of Bingley, for the supply reservoir; and Mr. Crosland, of Bradford, for the iron pipes. Messrs. Guest and Chrimes, of Rotherham, supply the stop-cocks, fire-plugs, &c. The iron pipes are being enamelled or coated by Mr. Angus Smith's patent process. The plans have been prepared by Mr. M'Landsborough, C.E. of Bradford, engineer to the Local Board, under whose directions the works are now being carried out. Mr. Geo. Hogg, of Saltaire, is clerk of works.

Glasgow.—Dr. William Clark, of Wester Moffatt, has placed at the disposal of the church the sum of 20,000*l.* for the erection and endowment of a free theological college in this city, provided others contribute a similar sum, so that 40,000*l.* should be immediately available for the purpose in view. The subscriptions in Glasgow towards this second sum already amount to 14,000*l.* Dr. Clark, moreover, offers to pay down or secure an additional sum of 10,000*l.* for the same object, provided a like sum of 10,000*l.* additional shall be guaranteed by responsible persons within the next twelve months.

CHURCH-BUILDING NEWS.

Braintree.—An appeal to the public has been made, with the sanction of the Archbishop of Canterbury and the Bishop of London, for assistance in the restoration of the old church here. Only a few hundred pounds can be realized within the parish, and the estimated cost of requisite restorations is about 4,000*l.*

Northampton.—An appeal has also been made on behalf of St. Giles's church, Northampton. This church has been for more than eighteen months undergoing extensive enlargement and restoration, including the extension of the church towards the west, the addition of a new north aisle, the opening of two of the ancient Norman arches, the whole of which are unfinished, that support the tower (by which means a large portion of the chancel will be made available for public worship), and the re-seating of the whole church in oak. The entire body of the church has also been newly roofed, and the windows are entirely new. The expense of this work will be not less than 4,800*l.* by which outlay the number of sittings will be nearly doubled, and the whole structure rendered more worthy of its sacred character. To meet this cost the parishioners have subscribed 3,000*l.* There remains a deficiency of 800*l.* or 850*l.* before the church can be thoroughly completed.

Cirencester.—The alterations in the parish church here, which, principally through the exertions of the rev. incumbent, have been from time to time made, are now to be further carried out by the removal of the organ and loft from the chancel arch, which it now occupies, to the western end of the north aisle.

Hardwick.—The following tenders for repairing Hardwick church, near Gloucester, were made:—

Coleman (Chaxhill)	£240 10 6
Smart (Gloucester)	239 10 0
Spire (Eastington)	237 0 0
Chobaton (Quedgley)	234 0 0

The last of these was accepted. Messrs. John Jacques and Son are the architects.

Swansea.—The foundation-stone of a seaman's chapel was laid here on Friday before last, by Mr. H. H. Vivian, M.P. The site, given by the corporation, is in Adelaide-street, contiguous to the quays and docks. The building will be in the form of a cross, and in the style of 14th century. It will accommodate about 300 persons without the galleries, which (if put up) will give 120 more. About 500*l.* have already been subscribed, including 200*l.* by the late Mr. J. H. Vivian, M.P. and almost 500*l.* more will be required.

Liverpool.—Bidston Church, near Woodside, says the local *Times*, is to be pulled down, for the purpose of being rebuilt. It is one of the oldest, smallest, and most thoroughly rural of the churches in the vicinity of Liverpool. It was originally intended to repair the roof and the body of the church, but the walls were so dilapidated that it was determined to rebuild, leaving the tower alone standing. The funds will be raised by public subscription; and, for every 100*l.* raised, Mr. Vyner, the lord of the manor, has promised to give 200*l.* Several ancient and curious tombstones are found in both church and churchyard. Strange enough, within half a mile from Bidston there stands a new church which has never yet been opened for public worship, from having been placed in Chancery just as it was finished.

Mottram.—On Wednesday before last, the ceremony of laying the basement stone of one of the pillars in the re-erection of the clerestory of the parish church, Mottram, was performed by the vicar. Messrs. Heaton, Hallows, and Stokes, are the contractors.

Haslingden.—The foundation-stone of a new Wesleyan chapel has been laid here. It is to be erected in the Pointed style of architecture. The entire length of the building will be 95 feet; the breadth, 50 feet 3 inches, exclusive of buttresses. The length of the ground plan will be as follows:—interior of chapel, 62 feet 6 inches; exterior, including the vestibule, 71 feet. There are to be three vestries: the centre one, over which will be placed the orchestra, will be 18 feet by 19 feet 6 inches: the other two vestries will be smaller, namely, 11 feet 6 inches by 12 feet. The chapel is estimated to seat 1,000 or more persons, and the entire cost is expected to be 4,000*l.* The plans were furnished by Mr. James Wilson, of Bath, architect, and Mr. William Waddington, of Padiham, has contracted for the execution of the whole of the work. The stone will be procured from the delfs in the neighbourhood, excepting that for corners, door-heads, &c. for which Fletcher Bank stone will be used, and Catlow stone for tracery.

Slaithwaite.—On Thursday before last, the new burial-ground in connection with St. James's Church, Slaithwaite, was consecrated by the Bishop of Ripon.

ON SOME OF THE PRESUMED PORTRAITS OF SHAKSPEARE.

More than two hundred years have passed away since Shakspeare's death, and yet, strange to say, of such a man, there is not known to exist one authentic portrait of his form or features. There are, however, in place of positively proved paintings of the great bard, many assumed contemporary likenesses, and it is of some of these works of art that I purpose to make a few remarks, especially with regard to those which are best known by engravings. Although I have referred to painted portraits, it would not be wise to pass without notice the bust of Shakspeare which probably gives to the beholder the nearest approach to the general characteristics of his face, supposed to have been modelled after his death at Stratford-upon-

Avon, in 1616, by either a sculptor of the name of Thomas Stanton, or one of the name of Gerrard Johnson. In 1748, by the receipts arising from a performance of Othello, at the old Town-hall, at Stratford, a Mr. John Hall, preserved, as well as he could, the fading pigments, which the original sculptor, after the manner of the ancients, had covered the figure with, and which Mr. Malone, in 1793, had painted white, to suit the then present taste, and for which he was afterwards most justly condemned, as well as satirized.

"Stranger, to whom this monument is shown,
Invoke the poet's curses on Malone
Whose meddling zeal his barbarous taste betrays,
And daubs his tombstone as he marred his plays."

The portrait known by the name of the Felton Portrait,* is one that, with the Chandos Head, has, perhaps, divided public opinion more than any other of the numerous claimants for the honour of truthfully representing Shakspeare's intellectual and winning features. It certainly has many claims for superiority over the Chandos portrait, now the property of Lord Ellesmere, not only in respect to the presumed antiquity of the painting, but to its almost complete identification with the engraved frontispiece to the collected edition of the poet's works, known as the first folio edition, 1623, by Martin Droeshout. If it could be proved that Droeshout took his engraving from the portrait we are referring to, there could exist no better testimony to its authenticity; but as this cannot be done certainly, the similitude of the one to the other has drawn forth a great many opinions on both sides of the question. Besides the critical opinions of many persons of celebrity on this subject, the present possessor of the portrait has had communications personally made to him by the late Sir Francis Chantrey, the late Mr. Phillips, R.A. Mr. Pickersgill, Sir Charles Eastlake, Sir William Ross, and others, to the effect that they felt no doubt, from a comparison of the portrait with the engraving, that Droeshout used the picture for the purpose of making his drawing. Assuming this to be the case, there is very little chance of the palm of preferment being given to the so-called Shakspeare of Lord Ellesmere, for independently of its being anything but a refined or intelligent-looking face, it bears no striking resemblance either to the Stratford bust in features or expression, or to the head of Droeshout's engraving, in the above referred to folio edition. The ear-rings in the Chandos Head do not seem to accord with the generally received notion of Shakspeare's style or habits, and although undoubtedly worn in the time of Queen Elizabeth by some courtiers, they do not seem to have been a prevailing fashion. The absence of ear-rings in the bust and in Droeshout's engraving, is, to a certain extent, evidence against the Chandos portrait being one of Shakspeare, although it does not prevent its being accepted as the likeness of some foreigner of distinction at the English court, as it bears many of the characteristics of a face from a more sunny clime than ours. Of the pencil-writing at the back of the oaken panel on which the Felton portrait is painted, I have only to remark that it certainly enhances the value of the whole, for there is little doubt of the age of the painting, and therefore the attestation of the artist's initials "W. B." under the name of the person represented, would seem, at least, to vouch for the authenticity of the intended likeness; for all who have seen the style of writing, agree that it is of the peculiar character of the period, and therefore most probably pencilled in on the completion of the work. Whether it be by William Burbage or not, must remain a matter of conjecture, for unfortunately there is little left to tell us of this artist's style, who, however, has a head attributed to him in the private gallery at Dulwich College, and is supposed to have been a scene-painter, as well as a fellow player with Shakspeare.

The next portrait I would call attention to is the once well-known painting in the possession of the late Mr. Dunford, and which has in its time been the subject of much discussion: it certainly presents a very noble and animated expression, and decidedly must rank as the portrait of an eminent and handsome man of the period; but it sadly lacks that soft and deeply intelligent look which one cannot help attributing to the bard, and which, in the Felton head, is so naturally, yet modestly depicted. The same remarks may be applied to the beautifully painted head, published in chromo-lithography, by Mr. Hogarth; for although it comes before the world with a very plausible story, yet I think there is little chance of its being considered a true likeness of those features, on which Ben Jonson wrote his famous lines, commencing—

"This figure that thou see'st put,
It was for *gentle* Shakspeare cut."

Before closing my remarks, I would allude to the little painting in oil and on copper, which I now exhibit, not from its intrinsic merit alone, but from the way in which it has been handed down as an heir-loom, for the last 100 years in the family, from a member of which I purchased it in 1851. In a paragraph of the will of the last bequeather, it is thus described—"and the small painting of Shakspeare on copper, in the old oak frame, mentioned in the will of my grandfather, Joshua Scholefield, of Saddleworth, in the county of York, bearing date the eleventh day of January, in the year of our Lord 1787, and directed by him to remain in the family,"* &c. &c.

I have now said enough, perhaps, to draw the attention of others much better qualified in every way than I am, to continue and enlarge upon the subject, for there remain in many galleries so-called portraits of Shakspeare, quite worthy of notice and remark, as the subject of them is of the admiration of the world, for all time to come.† G. R. W.

* The Rev. Thomas Jones, of Whitehall Chapel has stated to the present proprietor of the Felton Portrait, which some have assumed came from the Boar's Head, in Eastcheap, that his grandfather, Philip Jones, was the auctioneer who sold that property, and that there were pictures disposed of at the sale belonging to the premises, which some commentators have doubted.

* The old oak frame was not in existence when the picture was brought to me, or I should have valued it the more, but the veneration of Joshua Scholefield, of Saddleworth, for Shakspeare, is a pleasing instance of the deep-rooted affection his works have engrafted in many an Englishman's heart, whatever his station or calling may be, but which is not always perpetuated in the bosoms of his heirs, as we see in the present instance.

† Read before a meeting of the British Archæological Association, on the 13th inst.

M. CHARLES GEERTS, SCULPTOR.

We have just now learnt, with regret, the death of Monsieur Charles Geerts, the Sculptor, of Louvain, who expired on the 16th inst. at the age of 48.

M. Geerts was a native of Antwerp, but settled at Louvain, where he was professor of the Academy of Fine Arts. He was created by the King of the Belgians a Chevalier of the Order of Leopold, and was a member of several learned societies in Belgium and other countries. In the Great Exhibition of 1851, in London, he exhibited some of his works: one, a group of the Massacre of the Innocents, carved in oak, was particularly distinguishable. This group is now in the possession of Mr. W. Stirling, M.P.

M. Geerts had in execution a series of statues, between 200 and 300 in number, to fill the niches of the well-known Hotel de Ville of Louvain, and was engaged in casting bronze gates with *bas-reliefs* for the new church of St. Joseph, at Brussels, which were intended to be of similar dimensions and treatment with the famous gates by Ghiberti, at Florence. The numerous statuettes of the stalls recently erected in the cathedral of Antwerp, are also his work.

BUCKINGHAM PALACE AND ITS IMPROVEMENTS.

Not long since you called attention in your paper to the "Ram's-horn road," just constructed by the south-east corner of Buckingham-palace, but I believe nothing further has been said on the works going on there. The gigantic hoarding in that quarter, to the removal of which many have so long looked forward, in the hope that something both useful and beautiful might be disclosed, is at length *partially* gone; exposing to view a new entrance to the palace, consisting of one door, in the centre of an otherwise Ionic screen.

Is this entrance, with no projecting porch, a fit one for the hundreds of fair ladies to alight at when on a visit to her Majesty, perchance in a pouring rain? No, most assuredly not—for no sooner is the architect's back turned (for I imagine *him* innocent of the matter) than some one with more attention to the fair sex) sends for an upholsterer, who, doubtless, taking his idea from the elegant entrance annually erected in St. James's-palace, "rigs up" (for I can call it nought else) a wooden and canvas awning, bisecting the said Ionic columns in a manner that would have made Sir Wm. Chambers shiver.

Had the architect (whoever he be) ever read the "Palace of Architecture," by that excellent critic, George Wightwick, he would, I think, have at once acknowledged that a *covered* entrance was a most necessary adjunct to a palace; and instead of leaving it to be executed by the merciless hands of the upholsterer, would have designed one himself, in keeping with the existing buildings.

Workmen are now busy erecting a *high* range of stone piers, with *low* iron railings between them; gates inserted at intervals of a different height to either: the superfluous material in the piers would have gone far towards erecting a portico, and the piers themselves would have been much improved in appearance.

Stone curbs are put round the carriage drives inside the railing, and I understand that the intention is to plant shrubs, &c. I would suggest that grass be laid instead (as is done with such good effect in one of the courts of the Louvre), grass ever looking far more pleasant and refreshing than stunted smoky plants.

I will just mention, that by the new foot-gate from the park, there is always in wet weather, a puddle, fully a yard wide; which passengers have the option of either stepping into, or jumping over: the former is disagreeable and prejudicial to health, and the latter, if one jumped too high, might be attended with fatal consequences, as there is a horizontal iron-bar across the top, placed so low, that the sentries, who, I am credibly informed, are continually passing and repassing, are unable to do without knocking their bayonets.

I sincerely trust that the "ram's horn" complained of is only a temporary form of road, as the line of rails above mentioned would seem to indicate; and I shall therefore not make it a *butt* for criticism, further than to remark, that irrespective of its being *most* inconvenient for carriages, it has given pedestrians a wide and muddy street to cross, there being now not a vestige of a paved crossing, or any signs of one.—A. F.

A CHANCE FOR ARTIST-WORKMEN.

It is to be hoped that the advertisement of the committee of the Architectural Museum to artistical workmen will not be overlooked. Being desirous of encouraging and improving the practice of fine art workmanship (in stone, wood, and metal and in decorative painting), they have offered, as a first step, a prize of five guineas for the best specimen of wood carving which shall be exhibited in the present year in the rooms of the Museum during the month of November. Following this up, Mr. Ruskin offers a prize of five guineas for the most successful specimen of stone carving exhibited at the same time in the rooms of the museum.

The wood carving must be a study of natural foliage, fruit, flowers, or animals.

The prize for stone carving will be given for the most inventive and well-arranged Gothic capital, containing figures of men, beasts, or birds, not more than two on each side, arranged with leaves or any other object the workman likes.

Particulars may be obtained at the Museum, Canon-row.

This is an opportunity for a man to individualize himself which should not be lost.

PROPOSAL FOR IMPROVING THE DWELLINGS OF THE POOR IN THE UNITED PARISHES OF ST. GILES-IN-THE-FIELDS AND ST. GEORGE, BLOOMSBURY.

There are several courts in the parish of St. Giles so deplorably bad, the houses so filthy, and the inhabitants so depraved, that no district visitors can enter them; and the impurity of the atmosphere is the occasion of frequent illness to the Scripture readers or City missionaries, whose duties oblige them to visit these abodes. Our readers do not require to be told this.

It would be an incalculable benefit to the parish at large, and indirectly to the whole metropolis, could this state of things be remedied. The endeavour is to be made.

A committee has been organized for the purpose, and the Labourer's Friend Society have acceded to an arrangement, of which the following are the main features:—

The Labourer's Friend Society will expend on the improvement of the dwellings of the poor of St. Giles'-in-the-Fields, or St. George's, Bloomsbury, any sums

of money which may be entrusted to the Society for that special object.

The Society will accept of loans, in sums of not less than 50*l.* (subject to the condition of being expended as above), for which loans the Society will give security to the lender, with interest at the rate of 4 per cent. per annum, the principal to be returned at such period as, on the part of the lender, may be stipulated on making the advance, and afterwards on six months' notice, or, if required, on the part of the society, at three months' notice.

This arrangement affords the opportunity of investing money with a certainty of obtaining 4 per cent. interest, and, at the same time, of effecting results which will contribute to the sanitary, the moral, and religious welfare of this large and populous district of the metropolis.

The committee are looking for aid.

COMPETITIONS.

Lincolnshire Cemetery.—Twenty-seven sets of designs were received, and the committee agreed to recommend to the board the following;—For the chapels and lodge, 1st prize of 10*l.* to "Justitia;" 2nd prize, of 5*l.* to "Hope." "Justitia's" buildings are in the Gothic style, and his estimates are—chapel, 987*l.*; lodge, 295*l.* 10s.; dead-house, 128*l.*; fence, 287*l.* 12s.; gates and piers, 44*l.*; total, 1,742*l.*; "the side and end boundaries of the ground are to be formed of brickwork, with panels for the reception of tablets; the front boundary next to Canwick to have a low wall, with iron fencing." For the ground plans, the committee recommend that the first prize of 10*l.* shall be awarded to "Hope" (who does not give any estimate of the expense of carrying out his design), and that the second prize of 5*l.* should be given to another, distinguished by an indescribable device, whose estimate amounts to 2,000*l.*

New Cemetery, Warrington.—The town council has confirmed the report of the committee, and the chapels, lodges, &c. are to be commenced forthwith, from the designs of Mr. T. D. Barry.

Newcastle.—The United Burial Boards of St. John's, Westgate, and Elswick, have awarded the first premium of 20*l.* to Messrs. Johnston and Knowles, and the second premium of 10*l.* to Mr. J. Johnston, for their designs for the proposed cemetery.

Salisbury Cemetery.—The Burial Board for the parishes of St. Thomas, St. Edmund, and St. Martin, after considering the thirty-two designs sent, decided upon those with the motto,—"Ad rem cum Deo,"—which, upon opening the letter, proved to be from Mr. C. Hutchinson Edwards, architect, of London.

Yeovil, Somerset.—The Charity Trustees of this town having decided to erect fresh almshouses, they offered a premium of 10*l.* for a design for that purpose. Thirteen designs were submitted: that of Mr. T. W. P. Isaac, of Bath, was selected.

BRIDGEWATER CHURCH AND THE ARCHITECT'S CHARGES.

SIR,—In your remarks upon the "local animadversion" which my charges have met with on the above works, I have nothing to complain of: they evince your usual gentlemanly feeling, and you could scarcely have done less, being called upon as you were for an opinion.

I may perhaps be allowed to say, on the other hand, that Mr. Donaldson would have acted more wisely, in my opinion, had he followed your example, and suspended all comment on your remarks until in possession of the particulars of the case: a simple application would have secured them.

I will proceed at once to an explanation. In the spring of 1849 the work in question was gained in a public competition, and I was induced at that time to give up my Manchester business through ill health, intending on its re-establishment to take up my quarters in London: in the mean time I went to Bridgewater, where, for many months, being duly employed as architect, I conducted the works personally as well as professionally.

In April, 1850, the vicar gave me the sum of 33*l.* 13s. as some acknowledgment for past services in the extra superintendence, and, unasked, offered, for the future, if I would continue to fill the position of clerk of works, a salary of two guineas per week, in addition to the commission of five per cent. which I received as architect. This I accepted.

At a subsequent period, within three or four months of the completion of the works, I intimated to the vicar my intention of giving up the office of clerk of works, as the salary attached to it did not answer my purpose, and that I was impatient to get to London; but to secure me still in the position I had so long occupied, it was arranged that two and a half per cent. should be added to my commission of five per cent. to compensate me, rather than the increase which I demanded in the salary should be allowed. This also I accepted; and it will account, I trust satisfactorily, for the amount of commission being charged at seven and a half per cent. in my account; and I trust also, that the foregoing remarks will justify my having, under peculiar circumstances, filled the two offices of architect and clerk of works.

Regarding the surveyor's account, I may say that generally, in the provinces, the old combination of architect and surveyor still exists, and was familiar both to the vicar and myself; and no one will contend, I should say, that the architect should do surveyor's work without receiving payment for it.

Under this head I may refute a not very delicate statement of Mr. Donaldson's,—that I have charged for work in one or two cases twice over,—by saying, that in the first place, although the chancel roof is referred to in each, the work performed is wholly distinct, hence the two charges. Again, the sum of 24*l.* 13s. 10d. is clearly not "included in the first item at the head of the bill," as measuring is not included in the work for which an architect is entitled to charge a commission.

The editor of the *Bridgewater Times*, in bringing this matter under your notice,—the manner in which he has treated my explanations, and the withholding of letters which in fairness should have been published,—justifies me in saying that this attack is a disgraceful and a personal one, and only to be traced to the fact, that some months since I refused, as an insult to the profession, as well as to myself, an offer of 100*l.* or 120*l.* in liquidation of my claim for balance amounting to 384*l.* The Exhibition Committee have since paid me 250*l.* and I have the vicar's acceptance for 50*l.* payable in twelve months. I have given up the 84*l.* have charged them nothing for the re-use of 1,200*l.* worth of old materials, or for a detailed set of designs, with quantities complete, for the rebuilding of the tower and spire, and many other things I could name; but I think this will be enough to convince all that I have done injustice to no one but myself in the matter, and scarcely deserve the serious charge of having brought discredit upon the profession by the course I have pursued.

Mr. Donaldson may rest assured that I am as warm a supporter of the dignity of the profession as he can be, and have on many occasions preferred the loss of both money and work rather than consent to terms which might bring discredit on our noble profession.

I have now encroached, Mr. Editor, too much upon your space, and I fear upon your patience also, to allow of my making any comment upon Mr. Donaldson's proceedings in this business, or on the views he has expressed thereon: indeed, I hope that its general interest and importance will induce a more able hand than mine to take the subject up fully. The whole subject of architects' charges *must* be put upon a more satisfactory footing shortly, or most serious consequences to the profession must result.

W. H. BRAKSPEAR.

METROPOLITAN COMMUNICATIONS.

MR. LIONEL GISBORNE has brought his plan before the committee on Metropolitan Communication. He proposes to confine the waterway of the river to a width of not less than 700 feet (the width of Westminster new bridge) by means of quay walls on both shores, the present wharfs to be accommodated with floating basins of a minimum width of 100 feet, with entrances for barges; the quay wall on the Middlesex shore, from Westminster-bridge to London-bridge, to be 21 feet over Trinity high-water-mark, avoiding the necessity of draw-bridges over the entrances to the tidal basin. From Westminster-bridge to St. Paul's-wharf, where a new bridge was contemplated by the Corporation of London, Mr. Gisborne proposed to have a covered esplanade for foot passengers next the river, 20 feet in width, alongside of which for 50 feet the ground would be let for building, except opposite Whitehall-gardens, the Temple, &c. Parallel with the esplanade, and extending from Westminster-bridge to London-bridge, a railway to be constructed. Next the railway a street, 40 feet wide, from Westminster-bridge to the proposed bridge at St. Paul's. Large cellars to be constructed under the esplanade, railway, and road. Opposite Whitehall, to Temple-gardens, &c. as well as from St. Paul's-bridge to London-bridge, the quay-wall to be 4 feet above Trinity high water, and the esplanade, railway, &c. to be carried on columns not less than 25 feet apart, so as not to interfere with the view of the river. Next the river a road 70 feet wide to be made, alongside of which the ground to be let for building purposes. The entire cost of the works was estimated under 1,900,000*l.* The annual ground-rents of shops, warehouses, wharfs, &c. with the receipts derived from the railway, would amount to 103,000*l.* annually on an outlay of 1,900,000*l.* He considered 55,000*l.* per annum was available by letting river-side property, which at thirty years' purchase would amount to 1,650,000*l.*—about the estimated cost of the whole work.

The committee met last week to hear the evidence of Mr. John Fowler, the engineer of the Metropolitan Railway Company, who called their attention to the fact that the company he represented was already incorporated by Act of Parliament, and had obtained powers to construct a line of railway from the Great Western, at Paddington, to the General Post-office, which would connect the Great Western, the London and North-Western, and the Great Northern with each other and with the heart of the City; and that the requisite capital had been subscribed. It had always been the intention of the promoters of the Metropolitan Railway, he said, by future extensions, to connect their line with the Eastern Counties Railway, and with the great railways on the south bank of the Thames. The extension to the Eastern Counties would be entirely underground, and would include a passenger-station at Finsbury-circus. The extension to the south of the Thames would pass from the Post-office by Fish-street and Upper Thames-street, and cross the river by a new bridge nearly midway between Southwark and Blackfriars Bridges, and by two short spurs form a junction with the London-bridge and the Waterloo stations. All the great railways would then be brought into communication with each other, and passengers and goods would be enabled to pass uninterruptedly from one part of the kingdom to the other. The entire cost of the proposed extensions, with four lines of rails, would not exceed 2,500,000*l.*

Writing us on the subject of metropolitan communications, a correspondent, "A. H. H." says,—Would it not be advisable to form an unpretending *lacteal*, before attempting a great artery? I propose for experiment, that upon some wide line of communication,—Oxford-street, for instance—a locomotive machine be constructed, resembling a magnified everlasting "band," composed of light platforms, fitted with canopied chairs, and working upon wheels in a "groove," formed in the centre of the street, 6 feet in width for the double line, and a few inches below the surface, bounded on either side by an iron railing. The motion, which would only be interrupted for three minutes, at intervals of ten minutes, and giving a speed of twenty miles per hour, would be derived from a stationary engine, or engines, placed in a subterranean terminus, where the travelling platforms would leave the *up* and resume the down line by describing the necessary circle. The descent to this terminus might be by an incline of 20 degrees, as the machine would ascend or descend a steep incline, without its speed being accelerated or retarded, and thus render viaducts and tunnels unnecessary. All traffic having to cross the line of route might readily do so by the use of a simple appliance during the stoppage of the "band." The ordinary traffic would still be continued on either side of the street.

Notices of Books.

The Harmonic Law of Nature applied to Architectural Design. By D. R. Hay, F.R.S.E. Blackwood and Sons, Edinburgh and London.

WE mentioned Mr. D. R. Hay's paper on "The Harmonic Law of Nature applied to Architectural Design," when it was read at the Institute of Architects (see Vol. XII. p. 627). Some of our readers may be glad to know that it has been published in a distinct form, with the diagrams required to explain its author's views, and some additional matter. Although we have not succeeded in converting ourselves to a full belief in Mr. Hay's system, we cannot withhold our praise for the ability that gentleman has displayed in the numerous works published by him bearing on the subject. With reference to the objections that were taken to his condemnation of "the sculptured figures which decorate Gothic architecture," Mr. Hay withdraws the expression "paltry in composition and puerile in conception," but still holds "that they are often grossly disproportioned, and much distorted in their attitudes."

Popular Guide to the Kew Museum. By Sir W. J. HOOKER, K.H. Director. London: Longman and Co. 1855.

UNDER the title of "Museum of Economic Botany, or, a Popular Guide to the Useful and Remarkable Vegetable Products of the Museum of the Royal Gardens of Kew," Sir William Hooker has published a shilling pamphlet, which, besides the more strictly scientific details connected with the botany of the most interesting of

the contents of the Kew Museum, also contains, in a condensed form, many curious and notable particulars with respect to them, whether as to their practical utility, superstitious or poetical ideas regarding them, or their peculiar formation, mode of growth, &c. so that the whole forms an excellent and much wanted guide to the curiosities of the very interesting museum at Kew.

The British Flora, comprising the Phænogamous, or Flowering Plants and the Ferns. Second Edition, with Additions, numerous Figures, &c. By Sir WILLIAM JACKSON HOOKER and GEORGE A. WALKER ARNOTT. London: Longman and Co.

THIS is an elaborate, condensed, and strictly scientific work of 618 pages, and of a very different class from the above. To all interested in grasses, as of meadows and pastures, or in weeds in general, and in hedges and ditches, woods, fields, moors, hills, rocks, bogs, and ponds, &c. this work must be very useful, as well as to botanical students in general.

Architectural Sketches in Italy. By T. C. TINKLER, Architect, 10, Great Marlborough-street, London.

MR. TINKLER has now completed his work, comprising villa outlines, doorways, gateways, candelabra, and other matters, on twenty-four large tinted plates, which he gives for a guinea and a half. It will be found suggestively useful.

VARIORUM.

LORD ARTHUR HERVEY, in a short pamphlet,* suggests that the universities should supply lecturers for the counties adjoining, to be called *rural* or *circuit professors*, by which means "we might look forward to having the population of the whole of the United Kingdom brought within reach of the best instructors which the country can afford, and a large amount of useful knowledge and sound sentiment diffused." ——"The Unity of Science" is a pleasant rhapsody, by Mr. William M'Cormac, read before the Queen's College Literary and Scientific Society, at Belfast. "Science," says the writer, "is not individual, is not solitary. Science is an estate given to man to cultivate. He farms off a portion here and a portion there; raises now this crop, now that; yet it is still one and the same estate." He would say that a general knowledge of all the sciences should be obtained by those who would obtain supremacy in one. —— "Plan for a Female College," by the Rev. F. D. Maurice,† is the substance of a lecture delivered at the Working Men's College, Red Lion-square, to a class of ladies. The objects the projectors have in view will be shown by mentioning the subjects of a course of lectures which have been commenced. They refer to dispensaries; to the treatment of surgical patients in hospitals; to different employments, and their effects on health and character; to the bearing of physiology on the mind as well as the body, and the way in which it may be studied; to the household economy of the poor; to district visiting, to hospital visiting, with reference to the spiritual condition of the patients; to the teaching of children in schools, and to the teaching of adults; to the condition of country parishes; to sanitary laws; and to other laws which affect the condition of working people. ——In Dr. Stenhouse's lecture "On the economical Application of Charcoal to Sanitary Purposes,"‡ he urges that charcoal being so powerful an oxidiser, it is manifestly injudicious to incorporate it with manure which is not to be immediately applied to the ground. For no sooner are the manure and charcoal in contact, than a species of low combustion ensues, and the manure is soon greatly deteriorated. "Notwithstanding this very obvious objection, this is the very process which a Company, called 'The Health of Towns' Improvement Institute,' established in Dublin, is constantly recommending. They propose that the whole of the offal from Dublin and other large cities, instead of being run into the common sewers, as at present, should be collected and mixed with peat charcoal. To say nothing of the enormous expense of such a proceeding, the deterioration which the manure undergoes would of itself, in my opinion, be a serious if not a fatal objection to their scheme."——"Every Boy's Book" is not a misnomer, for it is addressed to boys of all minds and dispositions, giving, in addition to information as to all sorts of games and athletic exercises, inducements to look to natural history, chemistry, pneumatics, and other sciences, for enjoyments.* Out of the boys of to-day must be made the statesmen, governors, and teachers of to-morrow; and when it is remembered that if you do not give boys something good to do, they will do something that is not good,—they must be doing;—that if you do not find them healthful, and innocent, and elevating amusements, they will make amusements for themselves that may not be either,—the value of such a book as this is at once seen.

* Cambridge: Macmillan and Co. London: Bell and Daldy.
† Cambridge: Macmillan and Co. 1855.
‡ London: S. Highley, Fleet-street. 1855.

* "Every Boy's Book." By Geo. Forrest, M.A. London: Routledge and Co.

Miscellanea.

ST. MARY'S, STOKE NEWINGTON.—On the 9th inst. the rev. the rector stated "that a sum of about 5,000*l.* had been collected towards defraying the cost of the new church, and a further sum of 4,000*l.* was required. It was intended to be a solid lasting edifice, and could not be expected to spring up like a mushroom, as too many of the buildings of the present day do. However, it behoves the subscribers to have a definite understanding as to the arrangements that have been made with the builder—whether he has been limited to time and cost, and whether any contract has been entered into with him. Very few men are employed on the works, and they are sometimes standing still for want of stone. A number of stone sleeper blocks from the railways are being used in the foundations.—AN INHABITANT.

LEEDS MODEL LODGING-HOUSE AND MECHANICS' HOME.—From a circular letter, it appears that there has been a falling off in the number of lodgers at these institutions during the past year, ending 31st March, 1855, of 4,500, and that the receipts only leave a balance of 41*l.* 9s. 9d. instead of 126*l.* 1s. 4d. Mr. Denison, the founder of the institutions, believes from returns in the possession of his superintendent, that the decrease arises from the absorption into the militia and the regiments of the line of that class who avail themselves of such institutions, and he has issued the circular letter alluded to, addressed to chief constables of the principal towns in the kingdom, requesting a return of the number of lodgers in the model lodging-houses of such towns for the years 1853-4 and 1854-5.

MR. MONTI'S THIRD LECTURE.—Mr. Monti, in his third lecture, dwelt briefly upon the art of sculpture in Greece at the most flourishing period, when it was divested of the forms imposed upon it by religious symbolism. The most beautiful and sublime in art, he argued, was the ideal which could only be attained after a lengthened study of nature. He traced the different tendencies that prevailed among former great sculptors and the various subjects and schools which they followed. He eulogised the Achilles of the Louvre, the Parthenon Sculpture, and the Venus of Milo. The lecturer, in conclusion, announced that he should continue the subject on a future occasion, when he would point out the *modus operandi* of the Greek sculptor. His object, he said, was not so much to teach his hearers his noble art, as it was to make it well known, and plant a just appreciation of it in the minds of the English people.

SALE OF METROPOLITAN ROADS.—The Commissioners of the Metropolis Roads have let the tolls on the turnpike roads north of the Thames for one year, from the 1st July next. Mr. J. L. Panter, chief clerk to the commissioners, put up the several lots. The first, the Brentford, Kensington, and Isleworth roads, let last year for 15,910*l.* were put up at 15,000*l.* and knocked down to Mr. Cary at 15,020*l.*: the Upper and Lower Divisions of the Tyburn and Uxbridge roads, let last year for 9,730*l.* were put up at 9,200*l.* and sold for 9,270*l.*: the Harrow-road tolls, let last year at 1,150*l.* were put up at 1,100*l.* and sold for 1,110*l.*: the Kilburn and Edgware-road tolls, let last year for 3,230*l.* 11s. 6d. were put up at 3,100*l.* and were knocked down at 3,150*l.*

FIRE-PROOF CONSTRUCTION.—Our attention has been directed to specimens of clay-pots and hollow bricks, used by M. Vabre, in forming roofs and floors, by a combination of wrought-iron girders, supporting flat arches composed of these pots and hollow bricks. The system is stated to have been successfully applied.

A HINT TO MECHANICS.—The Commissioners of Patents have presented a complete collection of their series of copies of specifications of patents, with descriptive plates, indexes of patents, and all other works printed by them (embracing a period from 1617 to the present time), to the Marylebone Free Library, 27, Gloucester-place, New-road, on condition that they should be available for gratuitous consultation, and the taking of notes or sketches, every day in the week, from ten in the morning till ten at night.

THE NEW HIGH-WATER LANDING-PLACE AT MARGATE.—This work is nearly completed by the contractor, Mr. Bastow, from the plans of Messrs. Birch, of London. The pier commences at the Droit-office. The width at entrance is 84 feet: this part is curved, and it gradually narrows to 20 feet. At a distance of 180 feet from its commencement it is supported on twenty-three cast-iron piles, 12 inches in diameter, driven on an average 10 feet into the chalk. On the top of three cast-iron piles are placed seven wrought-iron girders 18 inches in depth, varying in length, being placed transversely according to the width of this part of the pier. On the top of these girders the timbers are placed, being 14 inches by 9 inches, running longitudinally, and on the top of these timbers is the platform. The pier-head is in the form of a parallelogram, 110 feet long by 45 feet broad, supported on fifty-seven screw piles, of solid wrought iron, 5½ inches diameter, and 20 feet long. There are three landing-stages at the head, suitable for steam-boats at any time of tide. The staircase is in the middle of the head, 13 feet wide, of easy ascent and descent. The pier is 14 feet above high-water mark of ordinary spring-tides. The total length is 1,240 feet, giving a promenade of upwards of 30,000 superficial feet. The first pile was driven on 3rd May, 1853, by the chairman of the Pier Company, and the last pile was driven on 3rd March, 1855. The contractor has had difficulties to contend with: three months had scarcely elapsed after the signing of the contract, when materials advanced 30 to 50 per cent. labour as much, and freights 90 per cent.

THE SCOTTISH SOCIETY OF ANTIQUARIES.—The eighth meeting of the session of this society was held in their hall, at Edinburgh, on Monday before last. The secretary mentioned that he had received communications from the president, and from Colonel James, which gave every hope that the Ordnance Survey of Scotland would include all existing archæological remains. Mr. Spottiswoode of Spottiswoode called attention to the unfortunate condition in which St. Margaret's Well existed; and a committee was appointed with the view of endeavouring to get the state of this relic improved.

FRIGHTFUL EFFECT OF THE STUDY OF ART.—Mr. Chadwick, speaking of the female school teachers of the Government Schools of Art, in his last pamphlet, says—"The females have been so far advanced in mental power and influence as to have been lost to the service by matrimonial engagements obtained with exceeding rapidity. To avoid these losses, plainer candidates were selected for training, but they, too, have obtained preference as wives to a perplexing extent." Mere "blues" have no chance whatever against these ladies of all colours,—these Masters of Hearts!

AN AQUARIUM FOR BATH.—Mr. Charles Empson has been long advocating the construction of an aquarium in the gardens of the Royal Literary Institution, through which the tepid water from the hot springs finds its way from the baths to the Avon. The most eminent professional men have been consulted, and it is estimated that, for a very small sum, an aquarium for tropical rarities might be constructed, which would be superior to that recently added to the Royal Gardens at Kew. The experiment has been tried with complete success in a portion of the large tank in York-street. By taking advantage of Nature's gifts to them, all cost of heating would be avoided. And they have in Mr. Empson an excellent "guide, philosopher, and friend." We do not know of a more earnest and loving student of nature in all forms than this gentleman.

ARBORAL RECORDS OF BUILDINGS.—I think "T. P.'s" excellent suggestion in your last number should not be confined to ecclesiastical buildings. Why should not some of the finest monuments of the constructive skill of our age be thus transferred to our lawns? Take, for instance, the Menai Tubular-bridge. Plant oaks of sufficient distance apart in the width, and say 40 feet in the length; and graft the trunks of poplar trees (cut off close to the root), from one to the other horizontally, so as to form the four corners of a tube. It is not perhaps generally known that this mode of grafting will succeed, and the poplars draw nourishment through their connection with the oaks (beech would do as well), so as to give out their foliage. A little training is all that would be required, and I am sure future generations would thank us.—G. R.

PATENT STOWING, LOWERING, AND DISENGAGING APPARATUS.—On 9th ult. we noted the pressing necessity for the adoption of some new and safe, as well as speedy, mode of lowering ship-boats in cases of shipwreck and other casualties, whether in emigrant or passenger, mercantile or naval ships. We then instanced one new invention of the kind required, and now we have to note another, namely, Russell's patent davit and boats disengaging apparatus, for which Messrs. Troughton and Bevan, of Gravesend, are agents. By means of this apparatus it appears ships'-boats may be safely and speedily lowered even by one man, whether in the ship or in the boat. Without diagrams the mechanism—though seemingly quite uncomplicated, and not apt to get out of order,—cannot readily be described; but it has the opinion in its favour of such nautical authorities as Captain Bullock, R.N. Admiral Falcon, and many others. The apparatus, we believe, is already in use in a Sheerness steamer, called the *Queen*, and also in some Gravesend and General Screw Navigation steamers.

IMPROVED APPARATUS FOR DELIVERING MAIL-BAGS BY RAIL.—The *Liverpool Times* describes an apparatus, invented by Mr. T. Dalton, of Whitechapel, formerly a mail guard, for taking up and laying down bags from the mail trains, while going at their usual speed. This apparatus, according to the paper referred to, has many points of superiority to that at present in use; the principal advantage being the ease, celerity, and safety, to the contents of the bags themselves, with which the operation is managed

ENGLISH JURORS FOR PARIS EXHIBITION.—The Lords of her Majesty's Committee of Privy Council for Trade have appointed the following noblemen and gentlemen to act as jurors for the Paris Universal Exhibition:—For Fine Arts, Painting, Engraving, and Lithography—Division 2, Class 28.—Lord Elcho, Daniel Maclise, esq. R.A. Frederick Tayler, esq. and J. H. Robinson, esq. For Sculpture—Class 29.—R. Westmacott, esq. R.A. and W. Calder Marshall, Esq. R.A. For Architecture—Class 30.—Sir Charles Barry, R.A. and Professor Cockerell, R.A. For Glass and Pottery—Division 1, Class 18.—John Webb, esq.

BOILER EXPLOSIONS.—We have had various lengthened communications on this subject, which our limits prevent us from giving, except in a very brief form. Mr. S. C. Gant, C.E. of Merthyr, is of opinion that nine-tenths of such explosions arise simply from "a deficiency of water in the boiler, by which means a portion of the inner tube becomes weakened by being over-heated, when a collapse almost inevitably occurs, and the water coming in contact with the fire, or over-heated metal, the pressure of steam is instantaneously increased to an enormous extent, thereby producing the 'strange force' mentioned." Mr. Gant feels convinced that, if proper attention were paid to the "feed," explosions would be of very rare occurrence. "An Analytical Chemist" deprecates (as we not long since did) the reference to "electricity" as an explanation of every obscure phenomenon, although he agrees with us in regarding it as one of the most important forces in creation, if we only understood it aright. Boiler explosions, he thinks, have nothing directly or specially to do with electricity. The mere evaporation of water, he remarks, does not evolve it, although wet steam in the act of escaping does so, and the more rapidly the escape, the more intense the electric evolution, as, indeed, the astonishing force of Armstrong's hydro-electric battery clearly shows, the steam being positive and the boiler negative. Neither wet steam nor insulated boilers, however, are in ordinary use; and, besides, it is before any steam has issued that it is supposed to evolve electricity as a cause of explosion. Boiler explosions, continues our correspondent, are occasioned by either thinness of boiler, as when old and worn, carelessness in allowing pressure to accumulate, or, as in 75 per cent. of such casualties, lowness of water, and undue heating of boiler tubes, suddenly converting a new "feed" of water into steam of great pressure. It has even been supposed, we may add, that in such a case water may be actually decomposed into its elements, the oxygen being fixed in the iron while the hydrogen expands with irresistible force into the gaseous form, and bursts the boiler.

ST. ALBAN'S ARCHITECTURAL AND ARCHÆOLOGICAL SOCIETY.—The tenth anniversary meeting of this society was to be held at the Town-hall, St. Alban's, on the 19th inst. The chair to be taken by the Earl of Verulam, President. A paper was to be read by Prof. Donaldson, on "The Palaces of the Louvre and Tuileries, Paris."

DEATH FROM WANT OF DRAINAGE.—An inquest ury held lately at Stalham, in Norfolk, on a child of two years, who had suddenly died there, finds a verdict to the effect "that the child died of spasmodic cholera, produced by the foul state of the yard where the child resided."

"HEAT WITHOUT FUEL."—At p. 75 of the fifth volume of the *Builder* (1847), we suggested, in an article titled, "Heat without Fuel," that by means of friction sufficient heat might probably be excited wherewith to produce steam, wherewith to continue the friction, and that it would then become a question whether or not a surplus of steam power might thus be obtained, wherewith to do other and less fruitless work than merely to evolve the heat necessary to produce the steam. Our main purpose, we confess, however, was to suggest, in scarcely a very serious way, something like a less absurd or less unfeasible idea of perpetual motion than ordinary. We now refer to the article in question, for two reasons;—first, because, happening to fall on it more easily than many suggestions in our columns not specially indexed and hence very troublesome to hunt out, we, by pointing specially to it, thereby dislocate the sneering apparatus of those who seem to think we have no right to remind our readers of our own suggestions, or to claim as our own what was subsequently appropriated, it might be, by the pretended sneerers themselves, as *their* original suggestion (although for all that we know, in the present instance, others may also have originated the suggestion quite independently and even previously to ourselves); and secondly, because we recently noted the following paragraph in *Galignani's Messenger*: "*Heat without Fuel.*—The problem of acquiring heat without fuel appears to have been solved by the invention of the machine of MM. Beaumont and Mayer, with which, by means of friction alone, they can make water boil. The machine, which may be seen at work at their establishment on the Quai Valmy, contains 400 litres of water, which is made to boil in two hours. A cone of wood, which turns in a cylinder so as to produce the necessary friction, is covered with tow, and that tow, in order that it may not catch fire, is kept constantly moistened by a stream of oil which runs on it. The heat gradually increases, until at last steam is generated."

DEPARTMENT OF ART.—An exhibition of the advanced works of the students in the metropolitan and provincial schools of art has been recently opened at Gore House. The award of medals has not given satisfaction. One correspondent says,—"The life-class in the metropolitan school, and study of anatomy, as well as the time-sketches of ornament, are all classes in which there are several models and therefore a competition, but in neither of these is there an award. Now, as the medal is to reward comparative merit, it is evident that these classes have been slurred for some unknown reason."

MONUMENT TO O'CONNELL.—A numerously attended meeting was held at Limerick, lately, for the purpose of erecting a statue to the late Mr. O'Connell, in that city. A letter was read from Mr. Hogan, the sculptor, in which he proposed to execute a statue, 8 feet high, in Portland or Caen stone, for 600*l*. The subscriptions to be received will govern the committee in the character of the proposed statue.

COMPETITION AT VIENNA.—A prize of 1,000 ducats was offered some time since for the plan of a church to be erected as a thank-offering in Vienna. Sealed letters were sent in with the respective plans, and one with the sign of a white cross upon a blue ground was selected. When the letter was opened it was found to contain the name of Henry Ferstel, a native of Vienna.

BUILDINGS AT ADELAIDE.—The new city bridge erecting under the supervision of the Government architect, by Messrs. McClure and Hinckley, is in progress. The superstructure was expected by last accounts from England. It is of wrought-iron, on the bow-string principle, and 100 feet in span. Government House is being enlarged at a cost of some 6,000*l*. The present house will form the eastern wing. The Legislative Council Buildings are now approaching completion. The style of the new Council Chamber is Elizabethan. The building covers 990 square yards. "By some strange inversion," says the *Adelaide Observer*, "the Upper House is stuck down below." We suppose, however, that, with our antipodes, where summer is winter and cherries bear their pips outside and their pulp within, this is all right. As for the President, it adds, "the builders are instructed to knock up a bit of a room for him which was not included in the original plan." The Adelaide City and Port Railway is regarded as the most important public work at present in progress. Labour, by last accounts, was at a discount for a season, and on this account it was thought a favourable time to begin such works as those of the new Hospital, for which money had been voted, and the plans prepared. The foundation-stone of a new Wesleyan chapel was laid on 30th April last: it is to be of stone, and to accommodate 500 persons. Mr. William Hanson, who many years since was with Mr. Thomas Cubitt, and subsequently with Mr. R. Stephenson, has been appointed by Government engineer to the Gawler Town Railway Commissioners.

RAILWAY MATTERS.—The committee on the Westminster Terminus (Clapham and Norwood Railway) Bill, which is to provide a west-end terminus for the Crystal Palace traffic, near Victoria-street, Westminster, have decided that the preamble was proved.——The committee on the West London and Crystal Palace and Westminster Terminus Bill have reported that the parties promoting it state that it is not their intention to proceed with the same.——The *New York Post* says, that on the Hudson River Railroad is an experimental car, furnished with an apparatus for ventilation. The air enters into a large funnel in front of the car, whence it is made to pass directly into the interior through an artificial shower of water. The shower is produced by a motion communicated from the engine, breaking the water into drops, and keeping it in constant agitation. The cost of fitting up a car with this apparatus is said to be about 150 dollars—not more.

MONUMENTAL.—Mr. Richardson has just placed in Kensal-green Cemetery, a temple tomb of Sicilian marble, by order of Major-general and Mrs. Perry. It is near to the tomb of General Casement, on the other side of the centre drive. It stands 15 feet high, by 6 feet at the lower base. The inscription is coloured azure. The same artist has on view two military memorials for Madras.

RATEABILITY OF THE ELECTRIC TELEGRAPH COMPANY.—In the Court of Exchequer, lately, judgment was given in the case of "The Electric Telegraph Company *v.* The Overseers of Salford," to the effect that the company were liable to be rated, and that judgment must be given for the overseers. Judgment, with costs, was accordingly entered for the respondents.

PIPE ACROSS THE THAMES.—There is now in course of construction upon the line of extension of the water-mains of the Chelsea Water Works Company, a pipe aqueduct, crossing the Thames from Putney to Fulham, and supported upon Mitchell's Patent Cast-iron Screw Piles. The structure is sufficiently advanced to be interesting to the profession.

THE ROYAL TOMBS AT DUNFERMLINE.—Dr. Henderson has been destroying a popular error. He says, in effect, within the hallowed walls of Dunfermline Abbey were interred the mortal remains of eight kings, five queens, six princes, and two princesses of Scotland. Their once magnificent tombs have long since disappeared,—not a vestige of them remains to point out the site of the ancient original "Locum Sepulturæ Regium!" Tradition, from time immemorial, has pointed to a spot now under the floor of the north transept of the present modern church as being "the sacred ground where the royal remains were deposited;" and why does tradition point to this place? Probably, because there lay here uncovered, until the year 1818, six extraordinary large flat gravestones, arranged in two parallel rows; and, as it was long the popular belief that there were only six kings interred in the abbey, very likely at some remote period an inference might have been drawn that these "six stones" covered the remains of the six kings, and thus, in process of time, tradition would point to these stones in this place as being the undoubted "Locum Sepulturæ Regium." But never did tradition commit a more serious error. For ages tradition has been pointing to this spot as the royal burial-place. All the while tradition has been pointing to a myth, for the royal tombs were not here. The site of the ancient "Locum Sepulturæ Regium" was not in this place: it was before the altars in the church of "the Holy Trinity." At least, so says our authority; and we will not contradict him.

TENDERS

For the erection of a girls' school and teacher's residence in the parish of Holy Trinity, Windsor. Mr. George Porter, architect. Quantities supplied.

Titcomb, Clewer	£1,050	0	0
E. Brown	1,045	0	0
Snowball, Slough	950	0	0
H. Tarrant	935	0	0
Holly, Windsor	930	0	0
B. Wells, Bermondsey (accepted)	898	0	0

For joiners' work to Castle Hall, Milford, Pembrokeshire. Mr. W. H. Lindsey, architect. Quantities supplied.

Rowland and Evans, London	£1,295	0	0
Lewis, Haverfordwest	1,280	0	0
Cadd and James, do. (accepted)	1,050	0	0

For sewer down the High-street of Putney. Mr. S. Wood, architect.

Adamson and Sons	£2,495	0	0
Crump	1,728	4	0
Yeoman	1,684	0	0
Parsons	1,618	0	0
Batterbury	1,493	0	0
Carlisle and Co.	1,389	0	0
W. and R. Aviss	1,307	18	0
Brown	1,175	0	0